

**Stage 1-2 Archaeological Assessment
1385 Bleams Road Kitchener**

Part of the Hiest&S Tract, in the Geographic Township
of Waterloo, now the City of Kitchener within the
Region of Waterloo, Ontario

Submitted to:
Alina Solomes

and

Ontario's Ministry of Heritage, Sport, Tourism and Culture
Industries

Submitted by:



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ORIGINAL REPORT

27 September, 2022

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Alina Solomes of Amjen Financial Inc. ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Part of the Hiest & S Tract in the Geographic Township of Waterloo, now the City of Kitchener within the Regional Municipality of Waterloo, Ontario (Figure 1). This investigation was conducted in advance of a proposed multi-building residential development in the community of Williamsburg (the 'Study Area'; Figure 1).

An archaeological assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario 1990b). According to Section 2.6.2 of the PPS, "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." To meet this condition, a Stage 1-2 assessment of the Study Area was conducted during the pre-approval phase of the development under archaeological consulting license P462 issued to Michael Pitul by the Ministry of Heritage, Sport, Tourism and Culture Industries ('MHSTCI') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'; Government of Ontario 2011).

The Study Area is a rectangular shaped parcel measuring approximately 0.37 hectares, situated just west of the southwestern corner at the intersection of Bleams Road and Fischer-Hallman Road (Figure 4). The southern and western sides are bordered by former agricultural land that at the time of the assessment, was being turned into a residential housing complex; to the north by Bleams Road; and to the east by the neighbouring single-family residential property. Two small overgrown grass/wooded areas occupied the western half of the Study Area, with the remaining area comprising manicured lawns.

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. As such, a Stage 2 field assessment was recommended.

The Stage 2 assessment was conducted on May 17th, 2022. The limits of the Study Area were clearly defined by Bleams Road to the north, and residential fencing to the west, south, and east. The testable areas of the Study Area were subject to a standard test pit survey at 5m intervals in accordance with Section 2.1.2 of the Standards and Guidelines (Government of Ontario 2011) over the areas of unkempt and manicured grass.

The test pit assessment resulted in the documentation of one archaeological site, AiHc-560

AiHc-560 comprised five test pits producing 59 post-contact Euro-Canadian artifacts covering an area of approximately 5m by 15m. AiHc-560 was identified in the centre of the Study Area, immediately adjacent to the existing 1864 schoolhouse. No further archaeological methods were employed since the five positive test pits at AiHc-560 produced sufficient archaeological resources to document and delineate the archaeological location and met the criteria for making a recommendation to conduct a Stage 3 archaeological assessment as per Section 2.1.3, Standard 1 of the Standards and Guidelines (Government of Ontario 2011).

Based on the results of the Stage 2 investigation, AiHc-560 has been interpreted as a medium size, late 19th century domestic scatter. Given the presence of at least 20 artifacts that date the period of use to before 1900 as well as the geographic location of the site, AiHc-560 meets the criteria for a Stage 3 Site Specific Assessment as per Section 2.2, Standard 1c and d of the Standards and Guidelines (Government of Ontario 2011) and retains CHVI. **A Stage 3 archaeological assessment is recommended for AiHc-560.**

The Stage 3 assessment of AiHc-560 will be conducted according to Section 3.2.2 of the Standards and Guidelines (Government of Ontario 2011). Typically, a Stage 3 assessment for sites

documented during a pedestrian survey of ploughed agricultural land begins with an intensive controlled surface pickup ('CSP') across the Stage 2 limits of site, conducted as per Section 3.2.1 of the Standards and Guidelines (Government of Ontario 2011). Given that AiHc-560 was recovered during the test pit survey, a CSP is not required. Instead, the Stage 3 investigation of the site will comprise test unit excavation only.

Because it is not yet evident that the level of CHVI at AiHc-560 will result in a recommendation to proceed to Stage 4, the Stage 3 assessment of AiHc-560 will consist of the hand excavation of 1m square test units every 5m in systematic levels and into the first 5cm of subsoil, as per Table 3.1, Standard 1 of the Standards and Guidelines (Government of Ontario 2011). Additional 1m test units, amounting to 20% of the grid total, will be placed in areas of interest within the site extent as per Table 3.1, Standard 2 of the Standards and Guidelines (Government of Ontario 2011). All excavated soil will be screened through a six-millimetre mesh; all recovered artifacts will be recorded by their corresponding grid unit designation and collected for laboratory analysis. If a subsurface cultural feature is encountered, the plan of the exposed feature will be recorded and geotextile fabric will be placed over the unit before backfilling the unit.

The Executive Summary highlights key points from the report only; for more detailed information and findings, as well as a complete set of recommendations, the reader should examine the complete report.

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Generous contributions by the following individuals and agencies made this report possible.

- Alina Solomes of Amjen Financial Inc

1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Alina Somes of Amjen Financial Inc. ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Part of the Hiest & S Tract in the Geographic Township of Waterloo, now the City of Kitchener within the Regional Municipality of Waterloo, Ontario (Figure 1). This investigation was conducted in advance of a proposed multi-building residential development in the community of Williamsburg (the 'Study Area'; Figure 1).

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The purpose of a Stage 1 Background Study is to compile all available information about the known and potential archaeological heritage resources within a Study Area, and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario 2011), the objectives of the following Stage 1 assessment were as follows:

- To provide information about the Study Area's geography, history, previous archaeological fieldwork and current land conditions;
- to evaluate in detail, the Study Area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- to recommend appropriate strategies for Stage 2 survey.

To meet these objectives Detritus archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the Study Area;
- a review of the land use history, including pertinent historic maps; and
- an examination of the Ontario Archaeological Sites Database ('ASDB') to determine the presence of known archaeological sites in and around the Study Area.

The purpose of a Stage 2 Property Assessment is to provide an overview of any archaeological resources within the Study Area; to determine whether any of the resources might be archaeological sites with cultural heritage value or interest ('CHVI'); and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario 2011), the objectives of the Stage 2 Property Assessment were as follows:

- To document all archaeological resources within the Study Area;
- to determine whether the Study Area contains archaeological resources requiring further assessment; and
- to recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

The licensee received permission from the Proponent to enter the land and conduct all required archaeological fieldwork activities, including the recovery of artifacts.

1.2 Historical Context

1.2.1 Post-Contact Indigenous Resources

Prior to the arrival of European settlers, much of the central and southern Ontario was occupied by Iroquoian speaking linguistic groups that had united to form confederacies, including the Huron-Wendat, the Neutral (or Attawandaran), and the Petun in Ontario, as well as the Five Nations Iroquois Confederacy in Upper New York State (Birch 2010; Warrick 2013). Of these groups, the Huron-Wendat established themselves to the east of the Niagara escarpment and the Neutral, to the west (Warrick 2000).

Throughout the middle of the 17th century, the Iroquois Confederacy sought to expand upon their territory and to monopolize the fur trade between the European markets and the tribes of the western Great Lakes region. A series of bloody conflicts followed known as the Beaver Wars or the French and Iroquois Wars, contested between the Iroquois Confederacy and the Algonkian speaking communities of the Great Lakes region. Many communities were destroyed including the Huron, Neutral, Susquehannock and Shawnee leaving the Iroquois as the dominant group in the region. By 1653 after repeated attacks, the Niagara peninsula and most of Southern Ontario had been vacated (Heidenreich 1990).

At this same time, the Anishinaabeg Nation, an Algonkian-speaking community situated inland from the northern shore of Lake Huron, began to challenge the Haudenosaunee for dominance in the Lake Huron and Georgian Bay region in order to advance their own role in the fur trade (Gibson 2006). The Algonkian-speaking groups that settled in the area bound by Lake Ontario, Lake Erie, and Lake Huron were referred to by the English as the Chippewas or Ojibwas. By 1680, the Ojibwa began expanding into the evacuated Huron-Wendat territory, and eventually into Southern Ontario. By 1701, the Haudenosaunee had been driven out of Ontario completely and were replaced by the Ojibwa (Gibson 2006; Schmaltz 1991).

The late 17th and early 18th centuries also mark the arrival of an Ojibwa band known as the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes. 'The Mississaugas' is the name that the Jesuits had used in 1840 for the Algonquin community living near the Mississagi River on the northwestern shore of Lake Huron (Smith 2002). The oral traditions of the Mississaugas, as recounted by Chief Robert Paudash and recorded in 1904, suggest that the Mississaugas defeated the Mohawk Nation, who retreated to their homeland south of Lake Ontario. Following this conflict, a peace treaty was negotiated between the two groups (Praxis Research Associates n.d.).

From the beginning of the 18th century until the end of the Seven Year War in 1763, the Ojibwa nation, including the Mississaugas, experienced a golden age in trade holding no alliance with either the French or the British (Schmaltz 1991). At the end of the 17th century, the Mississaugas' settled permanently in Southern Ontario (Praxis Research Associates n.d.). Around this same time, in 1722, the Five Nation Iroquois Confederacy adopted the Tuscarora in New York becoming the Six Nations (Pendergast 1995).

The Study Area first entered the Euro-Canadian historical record on December 7th, 1792 as part of Treaty No. 3, which included land acquired in the 'Between the Lakes Purchase' dating to May 22, 1784. According to the terms of the treaty, the Mississaugas ceded to the Crown approximately 3,000,000 acres of land between Lake Huron, Lake Erie and Lake Erie in return for trade goods valued at £1180.

The limits of the Treaty 3 lands are documented as comprising,

Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties;

Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County.

Morris 1943: 17-18

One of the stated objectives of the Between the Lakes Purchase was “to procure for that part of the Six Nation Indians coming into Canada a permanent abode” (Morris 1943: 17). Shortly after the transaction had been finalised in May of 1784, Sir Frederick Haldimand, the Governor of Québec, made preparations to grant a portion of land to those Six Nations who remained loyal to the Crown during the American War of Independence. More specifically, Haldimand arranged for the purchase of approximately 550,000 acres of land adjacent to the Treaty 3 limits from the Mississaugas. This tract of land, referred to as either the Haldimand Tract or the 1795 Crown Grant to the Six Nations, was provided for in the Haldimand Proclamation of October 25th, 1784 and was intended to extend a distance of six miles on each side of the Grand River from mouth to source (Weaver 1978). By the end of 1784, representatives from each constituent nation of the Six Nations, as well as other allies, relocated to the Haldimand Tract with Joseph Brant (Weaver 1978; Tanner 1987).

Throughout southern Ontario, the size and nature of the pre-contact settlements and the subsequent spread and distribution of Indigenous material culture began to shift with the establishment of European settlers. By 1834 it was accepted by the Crown that losses of portions of the Haldimand Tract to Euro-Canadian settlers were too numerous for all lands to be returned. Lands in the Lower Grand River area were surrendered by the Six Nations to the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township (Page & Co. 1879; Weaver 1978; Tanner 1987). Following the population decline and the surrender of most of their lands along the Credit River, the Mississaugas were given 6000 acres of land on the Six Nations Reserve, establishing the Mississaugas of New Credit First Nation, now the Mississaugas of the Credit First Nation (“MCFN”), in 1847 (Smith 2002).

Despite the encroachment of European settlers on previously established Indigenous territories, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009: 114). As Ferris observes, despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The Study Area is located in the German Company Tract within the Geographic Township of Waterloo and historical County of Waterloo, now the City of Cambridge within the Regional Municipality of Waterloo, Ontario

On July 24, 1788, Sir Guy Carleton, the Governor-General of British North America, divided the Province of Québec into the administrative districts of Hesse, Nassau, Mecklenburg and Lunenburg (Archives of Ontario 2012-2015). Further change came in December 1791 when the Province of Québec was rearranged into Upper Canada and Lower Canada under the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada; he initiated several initiatives to populate the province including the establishment of shoreline communities with effective transportation links between them (Coyne 1895).

In July 1792, Simcoe divided Upper Canada into 19 counties, including Waterloo County, stretching from Essex in the west to Glengarry in the east. Later that year, the four districts originally established in 1788 were renamed as the Western, Home, Midland and Eastern Districts. In 1816 the lands that included the Study Area were incorporated into the District of Gore. It was named Waterloo Township. Waterloo Township remained part of Halton County in

the District of Gore until 1842 when it was transferred to the District of Wellington. In 1852 it became part of Waterloo County (Moyer 1971).

Official settlement of Waterloo Township began in 1803, after the German Company of Pennsylvania had the lands surveyed by Augustus Jones, although settlers and squatters were present before the registered survey (Byerly 1935). Prior to this, the land was identified as Block Two within the northern part of the Haldimand Tract. Block Two had been part of lands ceded to the Six Nations by the Crown in 1784 in return for their loyalty during the American War of Independence. In 1796, under authority from the Six Nations' chiefs, Joseph Brant began to sell these parcels of land, including Block Two, to Richard Beasley (Moyer 1971). Beasley then sold 24,281 hectares ('ha') to the German Company, leading to the subsequent settlement of the Block. The leading members of the company, who were among the early settlers, were Samuel and John Bricker; and Daniel, Jacob, and John Erb. Allotments of land were assigned to the Company members through the drawing of lots. As Company members were entitled to multiple lots, the early maps of the area are a patchwork of similar family names: Bomberger, Erb, Bricker and Eby being common.

The Heistand Tract, with which the Study Area resides, was a parcel of over 700 acres located in the southwest corner of the Township of Waterloo purchased by Pennsylvania's David Heistand in 1804. By the 1840's development had started to occur in this area with the establishing of Sawmills at the Strasburg Creek and the community of Williamsburg started to grow to accommodate farmers in the area. In 1864 the Williamsburg School was built to service the growing population including many well known families historically like the Steckles, Webers, and Henhoeffers. The schoolhouse expanded in 1874 to accommodate increasing demand by students, and community organizations like the Farmer's Club and local churches; who gathered inside the school between 1875 and 1890 (Parks Canada 2009). Additions happened throughout the end of the 19th and into the 20th century including most notably the addition of a cloakroom and basement in 1922. By 1960 the property was converted into a private residence to which it remains today.

The Tremaine Map of Waterloo County (Tremaine and Tremaine 1861; Figure 2) shows Abraham D Clemens as the owner of the parcel of land in which the Williamsburg School resides, though no specific indication of the school is shown on the atlas along what is today Bleams Road and Fisher-Hallman Rd. No buildings are clearly shown on the lot, though it is known to have had the family farmstead; as indicated in the 1881 *The Illustrated Historical Atlas of the County of Waterloo, Ont.* (Walker & Miles 1877; Figure 3). The latter atlas shows two houses on the property and the location of the school along the south of Bleams Road, in the middle of the tract. The two houses do not show orchards or farm fields, however based on historical imagery of this area it can be assumed this tract was predominantly utilized for agriculture. *The Illustrated Historical Atlas of the County of Waterloo, Ont.* also shows an A.S. Clemens as the owner of the parcel in 1881, however upon looking at census data it is unclear the relationship, if any, between the owner of the parcel in the 1861 Tremaine atlas, and the 1881 Walker atlas. Further review of the historical land registry data shows no ownership data for this tract predating the middle of the 20th century.

It should be recognized that historical county atlases were funded by subscriptions fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area is a rectangular shaped parcel measuring approximately 0.37 hectares, situated just west of the southwestern corner at the intersection of Bleams Road and Fischer-Hallman

Road (Figure 4). The southern and western sides are bordered by former agricultural land that at the time of the assessment, was being turned into a residential housing complex; to the north by Bleams Road; and to the east by the neighbouring single-family residential property. The western half of the Study Area was made up primarily of unkempt grass with the remaining area to the east of the existing structures comprising manicured lawns.

The majority of the region surrounding the Study Area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the middle of the 19th century. Much of the region continues to be used for agricultural purposes today.

The Study Area is situated within the Mixedwood Plains Ecozone (Government of Ontario, Ministry of Natural Resources 2007), in the Lake Simcoe-Rideau Ecoregion (6E), and more specifically within the Stratford Ecodistrict (6E-1) that expands over 926 054ha in central southwestern Ontario. It features primarily cropland and pastures (75% of entire area), morainal deposits, and glacial features such as the Guelph Drumlin field (Wester et al 2018).

Drumlins can be formed of till (the unsorted debris of glaciers) or sand and gravel, soils varying from moderate to well drained and suitable to agriculture. Original forest cover probably consisted of a mix of pines and hardwoods, such as sugar maple, oak, beech and cherry. This pattern of forest cover is characteristic of areas of clay soil within the Maple - Hemlock Section of the Great Lakes - St. Lawrence Forest Province - Cool Temperate Division (McAndrews and Manville 1987:43).

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The closest source of potable water is the Grand River, located approximately five kilometres to the east of the Study Area.

1.3.2 Pre-Contact Indigenous Land Use

The portion of Southwestern Ontario surrounding the Study Area was occupied by people as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, people were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Waterloo Township (Ellis and Ferris 1990).

Table 1: Cultural Chronology for the Waterloo Township

Time Period	Cultural Period	Comments
9500 – 7000 BC	Paleo-Indian	first human occupation hunters of caribou and other extinct Pleistocene game nomadic, small band society
7500 - 1000 BC	Archaic	ceremonial burials increasing trade network hunter gatherers
1000 - 400 BC	Early Woodland	large and small camps spring congregation/fall dispersal introduction of pottery
400 BC – AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade network
AD 800 - 1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300 - 1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large palisaded villages

Time Period	Cultural Period	Comments
AD 1400 - 1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Previous Identified Archaeological Work

In order to compile an inventory of archaeological resources in the vicinity of the Study Area, Detritus consulted the archaeological site records stored in the ASDB (Government of Ontario n.d.). This database contains information concerning archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13km east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area is located within Borden block AiHc and close to Borden Blocks AiHb and AiHj.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MHSTCI will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

According to the ASDB, seven archaeological sites have been registered within a 1km radius of the Study Area (Table 2). Four of these have been identified as pre-contact Indigenous sites, two of which were affiliated with the Middle Archaic and Woodland periods respectively. No information is provided for the remaining three sites.

Table 2: Registered Archaeological Sites within 1km of the Study Area

Borden Number	Site Name	Time Period	Affinity	Site Type
AiHd-96	Bruly	Archaic, Early	Indigenous	findspot
AiHd-95	Sacalait	Pre-Contact	Indigenous	scatter
AiHd-94	Nutria	Pre-Contact	Indigenous	findspot
AiHd-93	Tarbox	Pre-Contact	Indigenous	findspot
AiHd-158	P2-AiHd-158	Pre-Contact	Indigenous	
AiHd-157	P1 AiHd-157	Pre-Contact	Other Indigenous	
AiHd-156		Woodland, Middle	Indigenous	village
AiHd-107		Pre-Contact	Indigenous	Unknown
AiHd-102		Pre-Contact	Indigenous	Unknown
AiHc-92	Bleams Road - Corduroy Road	Post-Contact	Euro-Canadian	road
AiHc-88	Huron Business Park 4	Pre-Contact	Indigenous	Unknown
AiHc-87	Huron Business Park 3	Pre-Contact	Indigenous	findspot

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Borden Number	Site Name	Time Period	Affinity	Site Type
AiHc-86	Huron Business Park 2	Archaic, Early	Indigenous	findspot
AiHc-85	Huron Business Park 1			
AiHc-57	Off Corridor			
AiHc-56	Williamsburg 2	Post-Contact	Euro-Canadian	
AiHc-55	Williamsburg 1	Post-Contact	Euro-Canadian	house
AiHc-50	Glencairn 3			
AiHc-498	Findspot #2	Pre-Contact	Indigenous	findspot
AiHc-49	Glencairn 2			
AiHc-482		Post-Contact	Euro-Canadian	Otherpossible residence, needs further work to determine this., residential
AiHc-48	Glencairn 1			
AiHc-472	findspot 2	Woodland, Early	Indigenous	
AiHc-471		Pre-Contact	Indigenous	scatter
AiHc-460		Archaic, Late, Post-Contact	Indigenous	Unknown, camp / campsite, farmstead
AiHc-456	Location 2			
AiHc-430		Post-Contact	Euro-Canadian	farmstead, outbuilding
AiHc-429		Archaic, Late, Archaic, Middle	Indigenous	camp / campsite
AiHc-428	Location 28	Post-Contact, Woodland, Late	Euro-Canadian, Iroquoian	Unknown, village
AiHc-427		Woodland, Late	Indigenous, Iroquoian	village
AiHc-426		Archaic, Late, Archaic, Middle	Indigenous	camp / campsite
AiHc-425	AiHc-425	Post-Contact, Pre-Contact	OtherIndigenou s, Euro-Canadian	
AiHc-424	Location 21	Post-Contact, Woodland, Late	Euro-Canadian, Iroquoian	Unknown, village
AiHc-423		Archaic, Late	Indigenous	camp / campsite
AiHc-422		Archaic, Post-Contact	OtherIndigenou s, Euro-Canadian	
AiHc-421		Archaic, Late	Indigenous	camp / campsite

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Borden Number	Site Name	Time Period	Affinity	Site Type
AiHc-420	Location 12-15 (AfHi-420)	Archaic, Middle	Indigenous	camp / campsite
AiHc-419				
AiHc-418		Post-Contact	Euro-Canadian	midden
AiHc-417	Location 7	Archaic	Indigenous	scatter
AiHc-416		Woodland, Late	Iroquoian	village
AiHc-415		Pre-Contact		scatter
AiHc-414		Woodland, Late		village
AiHc-413		Pre-Contact	Indigenous	camp / campsite
AiHc-389		Woodland, Late	Indigenous	Othercamp/campsite
AiHc-23		Other		Othercamp/campsite_
AiHc-223	Norris-Sternberg	Archaic	Indigenous	Othertoolmanufacturing, hunting
AiHc-164	Keyoke	Pre-Contact	Indigenous	scatter
AiHc-163	Lujan	Pre-Contact	Indigenous	findspot
AiHc-122		Pre-Contact	Indigenous	findspot
AiHc-121		Pre-Contact	Indigenous	findspot
AiHc-116		Pre-Contact	Indigenous	Unknown
AiHc-111		Pre-Contact	Indigenous	findspot
AiHc-110		Pre-Contact	Indigenous	findspot
AiHc-109		Pre-Contact	Indigenous	Unknown
AiHc-108		Pre-Contact, Woodland, Early	Indigenous	Othercamp/campsite
AiHc-107		Pre-Contact	Indigenous	Unknown
AiHc-106		Pre-Contact	Indigenous	Unknown
AiHc-105		Pre-Contact	Indigenous	Unknown
AiHc-104		Pre-Contact	Indigenous	Unknown

To the best of Detritus' knowledge, archaeological work has been previously conducted on the adjacent property to the Study Area.

A Stage 1-2 Archaeological Assessment done by Archaeological Research Associates Ltd. (ARA) resulted in the discovery and documentation of AiHc-414 (Location 1) and AiHc-415 (Location 2) in the fall of 2007. AiHc-414 was identified as a potential Late Woodland Village due to the assessment resulting in 220 lithics flakes, three projectile point tips, two biface fragments, one

end scraper, one utilized flake, and one core fragment. AiHc-415 also yielded 20 lithic flakes, one adze, one blank, and one scraper just 145m north of AiHc-414. An additional primary flake was documented as Findspot 3 further north of AiHc-415. 26 additional findspot locations were documented, of which 16 were recommended for Stage 3, including both AiHc-414 and AiHc-415. ARA postulated in the Stage 1-2 report that due to the close proximity of AiHc-414 and AiHc-415 it is possible that the latter is contiguous with the former, and it represents one single site.

The subsequent stage 3 assessments occurred in 2015 (AiHc-414) and 2016 (AiHc-415) by Stantec Consulting Ltd.; and resulted in the hand excavation of 245 and 57 test units respectively. Both sites yielded similar artifact types further supporting the claim that the sites are contiguous, and both yielded high enough quantities of artifacts to retain cultural heritage value or interest (CHVI) and justify mitigation of development impacts.

The Stage 4 mitigation at AiHc-415 consisted of the hand excavation around all high yielding Stage 3 units (10 or more artifacts) as well as Stage 3 units yielding temporally diagnostic artifacts. This mitigation was done by Bluestone Research in 2017. A total of 8 test units were excavated around the single high-yielding test unit from the Stage 3. Though nothing at AiHc-415 specifically indicated the possibility of settlement pattern, since it was considered a possible extension of AiHc-414, mechanical topsoil removal was undertaken using a smooth bucket backhoe and conducted according to section 4.2.3 of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). A total of 42 pre-contact artifacts were recovered, including 40 pieces of chipping detritus, 1 utilized flake, and 1 fragmentary faunal remains. A total of 9 longhouses were identified at AiHc-414, and further afield at the adjacent AiHc-416 and AiHc-427. AiHc-415 may be associated with the village, though no settlement pattern was found at AiHc-415 specifically. AiHc-415 is the only one of these sites to be within 50m of the Study Area.

1.3.5 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Detritus applied archaeological potential criteria commonly used by the MHSTCI to determine areas of archaeological potential within the Study Area. According to Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011), these variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, when considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site locations and types to varying degrees. As per Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011), water sources may be categorized in the following manner:

- Primary water sources, lakes, rivers, streams, creeks;
- secondary water sources, intermittent streams and creeks, springs, marshes and swamps;
- past water sources, glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- accessible or inaccessible shorelines, high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

As was discussed above, the closest source of potable water is the Grand River, located approximately five kilometres to the east of the Study Area.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The Study Area is situated within Ecodistrict 6E-1 (Stratford Ecodistrict). As noted previously, the primary soils within the Study Area have been documented as being suitable for pre-contact and post-contact Indigenous practices. Considering also the

length of occupation prior to the arrival of European settlers, as evidenced by the four pre-contact Indigenous sites registered within 1km of the Study Area, the pre-contact and post-contact Indigenous potential of the Study Area is judged to be moderate to high.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990b) or property that local histories or informants have identified with possible historical events.

As the background research presented above indicates, settlement in Waterloo Township began in the late 18th century. Both the Tremaines' map and the *Historical Atlas* (Figure 3) illustrate the extent to which Waterloo Township had been settled in the second half of the 19th century. Towns and hamlets are indicated, along with schools, post offices, churches and, by the late 1850s, the railway. Much of the established road system and agricultural settlement from that time is still visible today. Considering these factors, the Euro-Canadian archaeological potential of the Study Area is judged to be moderate to high.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as per Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario 2011). However, current aerial imagery of the Study Area identified no potential disturbance areas within the Study Area.

2.0 Field Methods

The Stage 2 assessment was conducted on May 17th, 2022. The limits of the Study Area were clearly defined by Bleams Road to the north, and residential fencing to the west, south, and east.

During the Stage 2 field work, the weather was a mix of sun and cloud with a high of 15°C. Assessment conditions were excellent; at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1 to 11 demonstrate the land conditions throughout the Study Area at the time of the assessment, including areas that met the requirements for a Stage 2 archaeological assessment, as per Section 7.8.6, Standards 1a and b of the *Standards and Guidelines* (Government of Ontario 2011). Figure 4 illustrates the Stage 2 assessment methods, including all photograph locations and directions; in relation to the development of the Study Area.

Approximately 85% of the Study Area consisted of mostly grass lawns surrounding the schoolhouse and immediately adjacent to the neighbouring single-family house. These areas were subject to a standard test pit survey at 5m intervals in accordance with Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario 2011). Test pits were excavated to within 1m of all standing structures as per Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario 2011). All test pits were at least 30 centimetres (cm) in diameter and were excavated 5cm into sterile subsoil. The soils were then examined for stratigraphy, cultural features, or evidence of fill. All soil from the test pits was screened through six-millimetre (mm) hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit.

The test pit assessment resulted in the documentation of one archaeological site, AiHc-560

AiHc-560 comprised five test pits producing 59 post-contact Euro-Canadian artifacts covering an area of approximately 5m by 15m. AiHc-560 was identified in the centre of the Study Area, immediately adjacent to the existing 1864 schoolhouse. No further archaeological methods were employed since the five positive test pits at AiHc-560 produced sufficient archaeological resources to document and delineate the archaeological location and met the criteria for making a recommendation to conduct a Stage 3 archaeological assessment as per Section 2.1.3, Standard 1 of the *Standards and Guidelines* (Government of Ontario 2011).

All cultural material encountered was collected and recorded to the associated test pit and returned for laboratory analysis. Universal Transverse Mercator ('UTM') coordinates were

recorded for all positive test pits as well as a fixed landmark using a Garmin eTrex 10 GPS unit with a minimum accuracy 3m (North American Datum 1983 ('NAD83') and UTM Zone 17T). These coordinates are presented in the Supplementary Documentation to this report.

The remaining 15% of the Study Area comprised the possible disturbance areas identified on the current aerial imagery of the Study Area (see Section 1.3.4 above). Following the Stage 2 property inspection, conducted according to Section 2.1.8, Standard 1 of the Standards and Guidelines (Government of Ontario 2011), the existing structures including an 1864 schoolhouse, the asphalt laneway and parking area were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources, as per Section 2.1, Standard 2b of the Standards and Guidelines (Government of Ontario 2011). All of the visibly disturbed areas documented within the Study Area were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the Standards and Guidelines (Government of Ontario 2011).

3.0 Record of Finds

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 above. An inventory of the documentary record generated by the fieldwork is provided in Table 3 below.

Table 3: Inventory of Document Record

Document Type	Current Location	Additional Comments
1 page of field notes	Detritus office	Stored digitally in project file
1 map provided by the Proponent	Detritus office	Stored digitally in project file
1 field map	Detritus office	Stored digitally in project file
11 photographs	Detritus office	Stored digitally in project file

All of the material culture collected during the Stage 2 assessment is contained in one box and will be temporarily housed in the offices of Detritus until formal arrangements can be made for its transfer to His Majesty the King in right of the Province of Ontario or another suitable public institution acceptable to the MHSTCI and the Study Area's owners.

3.2 Cultural Material

The Stage 2 assessment of AiHc-560 produced 59 Euro-Canadian artifacts (summarized below in Table 3). No subsurface features or fire cracked rock were observed. A sample of the artifacts recovered from the Stage 1-2 assessment is depicted in Section 9.2 of this report.

Table 3: SITE Artifact Summary

Artifacts	Frequency	%
household	15	25.42
structural	35	59.32
personal	5	8.47
miscellaneous metal	4	6.78
Total	59	100.00

3.2.1 Household (see Appendix 10.2.3)

A total of 15 household artifacts were recovered during the Stage 2 test unit excavation, representing 25.42% of the total collection. The household artifacts were dominated by bottle glass, representing 80% (n=12) of the assemblage, with relatively small amounts of other household artifacts including a shard of lightbulb glass, a clothing pin, and a piece of mammalian faunal remains of unknown origin. The household artifact assemblage is summarized in Table 4.

Table 4: Household Assemblage

Household Artifacts	Frequency	%
clothing pin	1	6.67
faunal remains, mammalian	1	6.67
glass, bottle	12	80.00
glass, light bulb	1	6.67
Total	15	100.00

Bottle glass fragments are generally not diagnostic and are often simply categorized according to colour. Until 1880, clear glass bottles often displayed an aqua tinge that resulted from the iron additives used to decolourise it. Clear or colourless glass came into much more widespread use after the development of automatic bottle manufacturing machines in the early 20th century (Lindsey 2022). A variety of colours of bottle glass were identified at AiHc-560 including more than 60% colourless/clear pieces; but also, smaller quantities aqua, brown, and dark blue (Table 9). "Although color is one of the more obvious and relatively easy to describe attributes of a historic bottle, it is unfortunately of limited utility in classifying a bottle as to age or type" (Lindsey 2022). Table 8 shows the bottle glass assemblage by colour.

Colours such as aqua, brown, and even some dark blue were generally more common prior to 1880 for a variety of specific uses, though extended into use during the 20th century as functionality changed. For example, olive-green bottle glass was commonly used for fluids such as wine and champagne, mineral water, medicinal, and even writing ink prior to 1880 but shifted into being more commonly used for beer, liquor, and wines to which they are still used into modernity.

Colourless or clear glass, which was the most abundant colour found at AiHc-560, was rarely found before the 1870s, and over the following decades quickly became the most popular type of glass found in a household due to advancing technologies and increased manufacturing keeping costs of vessels relatively low (Kendrick 1968; Toulouse 1969a; Fike 1987; U. of U. 1992).

Table 5: Bottle Glass Assemblage by Colour

Household Artifacts	Frequency	%
clear	5	62.50
aqua	1	12.50
brown	1	12.50
dark blue	1	12.50
Total	8	100.00

3.2.2 Structural Artifacts

A total of 27 pieces of window glass were recovered, all of which measure greater than 1.6mm thick. Window glass can be temporally diagnostic in a limited manner. In the 1840s, window glass thickness changed dramatically, in large part due to the lifting of the English import tax on window glass in 1845. This tariff taxed glass by weight and encouraged manufacturers to produce thin panes (Kenyon 1980). Most window glass manufactured before 1845 tended to be thinner, while later glass was thicker. The exclusivity of window glass shards thicker than 1.6mm suggests that the glass is more likely to be from the later half of the 19th century.

Furthermore, five cut nails were identified out of a total of six nails or nail pieces collected at AiHc-560; the remaining being a more modern wire nail. Originally, all nails were hand made and required skill, as well as a forge to manufacture. As a result, early nails were relatively expensive and methods were sought to have them machine made. Whereas machine cut, or square nail manufacture began in the late 1790s, cut nails only become readily available in Upper Canada by the 1830s. Cut nails revolutionized house framing and were common for a long period, from approximately 1830 to 1890 by which time they had been largely supplanted by wire nails. Wire drawn nails are identical to the type of nails used today, with their round heads and wire shafts (Adams 1994). In addition to the nails, two metal screws were also found at AiHc-560.

3.2.3 Personal

Five pieces of slate pencil were recovered during the Stage 2 assessment. The value of paper, especially writing quality paper, in the 1800s prevented its use for junior schoolwork and everyday household use. Instead, both adults and children commonly used slate boards and pencils. Boards comprised a flat sheet of fine quality slate (typically 2.5mm thick) bounded in a wood frame. The pencils were typically 3-5mm thick and composed of slate or shale softer than the board. There were several methods of pencil manufacture, from reducing slices it by forcing them through tubes (the evidence of which can be seen as flat facets along the pencil length); turning slices of slate (Davies 2005:64), or by grinding slate or shale to a powder to then compress it in moulds (Evening Standard 1891). Given the expense of slate for roofing purposes, most thin slate fragments on historic sites are likely to be from writing boards.

3.2.4 Miscellaneous Metal

Four pieces of modern miscellaneous metal were recovered during the Stage 2 assessment at AiHc-560.

3.2.5 Artifact Catalogue

See Table 6 below of the complete artifact catalogue from the Stage 2 assessment at AiHc-560.

Table 6: AiHc-560 Catalogue

Cat#	Context	Layer	Artifact	Frequency	Depth(m)	Colour	Comments
1	test pit 1	1	glass, bottle	3	0.24	clear	
2	test pit 1	1	metal, screw	1	0.24		
3	test pit 1	1	glass, bottle	3	0.24	aqua	
4	test pit 1	1	glass, bottle	1	0.24	dark blue	
5	test pit 1	1	faunal remains, mammalian	1	0.24		unknown
6	test pit 1	1	window glass	12	0.24	clear	>1.6 mm
7	test pit 1	1	window glass	2	0.24	aqua	>1.6 mm
8	test pit 2	1	metal, undetermined	4	0.30		
9	test pit 2	1	metal, screw	1	0.30		
10	test pit 2	1	nails, cut	2	0.30		
11	test pit 2	1	nails, wire	1	0.30		
12	test pit 2	1	clothing pin	1	0.30		
13	test pit 2	1	glass, bottle	1	0.30	clear	
14	test pit 2	1	slate, pencil	5	0.30		
15	test pit 3	1	glass, bottle	1	0.22	clear	vertical ribbing
16	test pit 3	1	glass, light bulb	1	0.22	clear	
17	test pit 4	1	glass, bottle	1	0.23	brown	
18	test pit 4	1	glass, bottle	1	0.23	clear	
19	test pit 4	1	window glass	9	0.23	aqua	>1.6 mm
20	test pit 4	1	nails, cut	1	0.23		
21	test pit 5	1	nails, cut	2	0.20		
22	test pit 5	1	glass, bottle	1	0.20	clear	
23	test pit 5	1	window glass	2	0.20	clear	>1.6 mm
24	test pit 5	1	window glass	2	0.20	aqua	>1.6 mm

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment on Part of the Hiest & S Tract in the Geographic Township of Waterloo, now the City of Kitchener within the Regional Municipality of Waterloo, Ontario (Figure 1). This investigation was conducted in advance of a proposed multi-building residential development in the community of Williamsburg. The Study Area is a rectangular parcel measuring 0.37ha, located on the south side of Bleams Bare Road, with a current housing development to the west and south and an existing residential property to the east. The entire property was subject to assessment.

At the time of the assessment, the Study Area consisted of mostly grass lawns surrounding the schoolhouse and immediately adjacent to the neighbouring single-family house. The remainder of the Study Area comprised the disturbance areas including the existing 1864 schoolhouse, gardening sheds, and the asphalt laneway and parking area.

The Stage 1 background research indicated that portions of the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. Therefore, a Stage 2 assessment was recommended for the entire property.

The Stage 2 field assessment resulted in the identification and documentation of one late 19th century Euro-Canadian archaeological site, AiHc-560.

The artifact assemblage was dominated by structural artifacts (59.32%; n=35), most of which were window glass shards thicker than 1.6mm and metal cut nails; This evidence suggests a late 19th to early 20th century period of occupation. The next most frequent artifact collection comprised 12 shards of bottle glass (20.33%) though most of the bottle glass pieces were clear and likely machine manufactured in the late 19th or early 20th centuries. Five slate pencils (8.7%), one clothing pin, one piece of mammalian bone, one glass lightbulb shard, and four pieces of miscellaneous metal rounded out the Stage 2 assemblage.

The lack of ceramics and predominance of structural and household items suggests that AiHc-560 is a small Euro-Canadian scatter that documents the occupation of the 1864 schoolhouse located on the property spanning the late 19th to early 20th centuries. This period corresponds with the date of construction and active use of the schoolhouse.

4.1 Preliminary Indication of Sites Possibly Requiring Stage 4 Archaeological Mitigation

Based on the results of the Stage 2 assessment presented above AiHc-560 was determined to retain CHVI and is recommended for Stage 3 archaeological assessment. A preliminary indication of whether the sites could be eventually recommended for Stage 4 archaeological mitigation is required under Section 7.8.3, Standard 2c of the Standards and Guidelines (Government of Ontario 2011). As noted above, AiHc-560 has been identified as Euro-Canadian domestic deposits dating from the late 19th to early 20th century. Although the sites meet the criteria for Stage 3 assessments, it is not yet clear whether a Stage 4 mitigation will be recommended. No firm recommendation for, or against, Stage 4 Mitigation of Developmental Impacts will be made at any of the sites documented during the current Stage 2 assessment until the forthcoming Stage 3 archaeological assessment has been conducted.

5.0 Recommendations

Based on the results of the Stage 2 investigation, AiHc-560 has been interpreted as a medium size, late 19th century domestic scatter. Given the presence of at least 20 artifacts that date the period of use to before 1900 as well as the geographic location of the site, AiHc-560 meets the criteria for a Stage 3 Site Specific Assessment as per Section 2.2, Standard 1c and d of the Standards and Guidelines (Government of Ontario 2011) and retains CHVI. **A Stage 3 archaeological assessment is recommended for AiHc-560.**

The Stage 3 assessment of AiHc-560 will be conducted according to Section 3.2.2 of the Standards and Guidelines (Government of Ontario 2011). Typically, a Stage 3 assessment for sites documented during a pedestrian survey of ploughed agricultural land begins with an intensive controlled surface pickup ('CSP') across the Stage 2 limits of site, conducted as per Section 3.2.1 of the Standards and Guidelines (Government of Ontario 2011). Given that AiHc-560 was recovered during the test pit survey, a CSP is not required. Instead, the Stage 3 investigation of the site will comprise test unit excavation only.

Because it is not yet evident that the level of CHVI at AiHc-560 will result in a recommendation to proceed to Stage 4, the Stage 3 assessment of AiHc-560 will consist of the hand excavation of 1m square test units every 5m in systematic levels and into the first 5cm of subsoil, as per Table 3.1, Standard 1 of the Standards and Guidelines (Government of Ontario 2011). Additional 1m test units, amounting to 20% of the grid total, will be placed in areas of interest within the site extent as per Table 3.1, Standard 2 of the Standards and Guidelines (Government of Ontario 2011). All excavated soil will be screened through a six-millimetre mesh; all recovered artifacts will be recorded by their corresponding grid unit designation and collected for laboratory analysis. If a subsurface cultural feature is encountered, the plan of the exposed feature will be recorded and geotextile fabric will be placed over the unit before backfilling the unit.

6.0 Advice on Compliance with Legislation

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

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed 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 Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

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

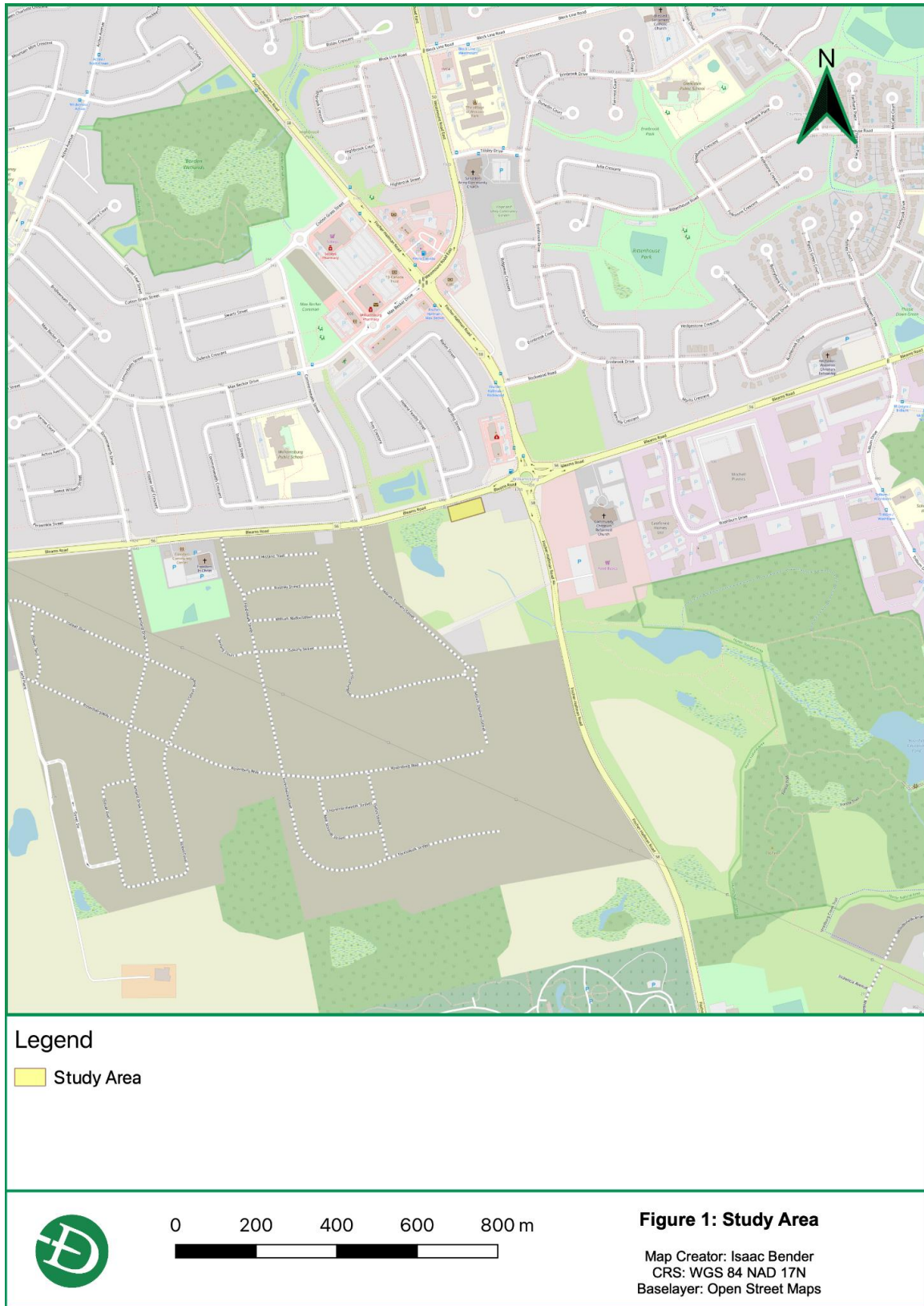
The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

7.0 Bibliography and Sources

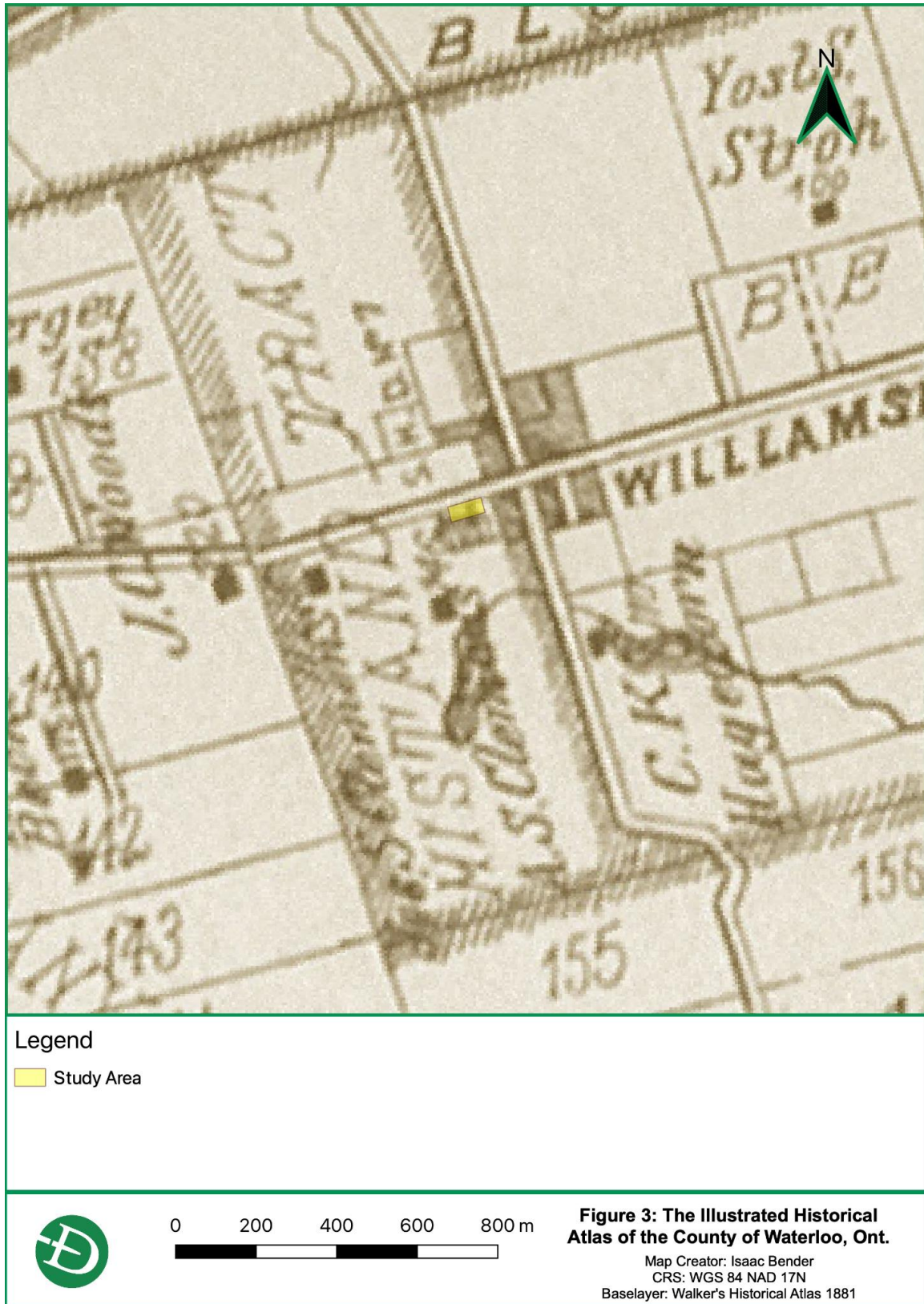
- Archives of Ontario. 2012-2015. *The Evolution of the District and County System, 1788-1899*. Electronic document: http://www.archives.gov.on.ca/en/maps/textdocs/ontario-districts-maps.aspx#districts_1788. Last accessed, February 23, 2021.
- Birch, J. 2010. *Coalescence and Conflict in Iroquoian Ontario*. Electronic resource: http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence_and_Conflict_in_Iroquoian_Ontario. Last accessed January 20, 2022.
- Bricker, I.C. 1934. "The History of Waterloo Township up to 1825." In, *Annual Reports*, Waterloo Historical Society, volume 21 & 22: 81-124.
- Byerly, A.E. 1935. *The Beginning of Things in Wellington and Waterloo Counties*. Guelph: Guelph Publishing Company.
- Chapman, L.J. and D.F. Putnam. 1984. *The Physiography of Southern Ontario*. Third Edition. Ontario Geological Survey. Special Volume 2. Ontario Ministry of Natural Resources.
- Coyne, J. H. 1895. *The Country of the Neutrals (As Far as Comprised in the County of Elgin): From Champlain to Talbot*. St. Thomas: Times Print.
- Ellis, Chris J. and Neal Ferris (editors). 1990. *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Number 5. Ontario Archaeological Society ('OAS').
- Eby, Ezra. 1889. *A Biographical History of the Eby Family*. Heet and Eby Printers.
- Ferris, Neal. 2009. *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. University of Arizona Press.
- Gentilcore, R. Louis and C. Grant Head. 1984. *Ontario's History in Maps*. University of Toronto Press. o
- Gibson, M. M. 2006. *In the Footsteps of the Mississaugas*. Mississauga Heritage Foundation.
- Government of Ontario. n.d. Archaeological Sites Database Files. Archaeology Program Unit, MHSTCI.
- Government of Ontario. 1990a. *Ontario Planning Act*, R.S.O. 1990, CHAPTER P.13. Last amendment: 2021, c. 25, Sched. 24. Electronic document: <https://www.ontario.ca/laws/statute/90p13>. Last accessed January 12, 2022.
- Government of Ontario. 1990b. *Ontario Heritage Act*, R.S.O. 1990, CHAPTER O.18. Last amendment: 2021, c. 4, Sched. 6, s. 74. Electronic document: <https://www.ontario.ca/laws/statute/90o18>. Last accessed January 12, 2022.
- Government of Ontario. 1990c. *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, CHAPTER F.31. Last amendment: 2021, c. 4, Sched. 11, s. 11. Electronic document: <https://www.ontario.ca/laws/statute/90f31>. Last accessed January 12, 2022.
- Government of Ontario. 2011. *Standards and Guidelines for Consultant Archaeologists*. MHSTCI.
- Heidenreich, Conrad. 1990. History of the St. Lawrence-Great Lakes Area to 1650. In Ellis, Chris J. Neal Ferris (editors), *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publications of the London Chapter OAS No. 5, pp. 475-492. Ontario Archaeological Society Inc.
- McAndrews, J.H. and G.C. Manville. 1987. Descriptions of Ecological Regions. In R. Cole Harris, (editor), *Historical Atlas of Canada from the Beginning to 1800*. University of Toronto Press.
- Morris, J.L. 1943. *Indians of Ontario* [1964 reprint]. Department of Lands and Forests, Government of Ontario.

- Moyer, Bill. 1971. *This Unique Heritage: The Story of Waterloo County*. Radio Station CHYM Kitchener.
- Page, H.R. & Co. 1879. *Illustrated Historical Atlas of the County of Haldimand, Ontario*. H.R. Page & Co.
- Parks Canada. 2009. Williamsburg School. *Canada's Historic Places*. Electronic document: <https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=14985&pid=0>. Last accessed September 12 2022.
- Pendergast, James. 1995. "The Identity of Jacques Cartier's Stadaconans and Hochelagans: The Huron-Iroquois Option." In André Bekerman, and Gary Warrick (editors), *Origins of the People of the Longhouse: Proceedings of the 21st Annual Symposium of the Ontario Archaeological Society*, pp. 106-118. Ontario Archaeological Society.
- Praxis Research Associates. n.d. *The History of the Mississaugas of the New Credit First Nation*. Lands, Research and Membership, Mississaugas of the Credit First Nation.
- Schmalz, Peter S. 1991. *The Ojibwa of Southern Ontario*. University of Toronto Press.
- Smith, Donald. 2002. Their Century and a Half on the Credit: The Mississaugas. In Frank Dieterman (editor), *Mississauga: The First 10,000 Years*, pp. 107-122. Eastend Books.
- Steiner, Sam J. 2016. Joseph B. Hagey–Benjamin Eby's Successor. In, *In Search of Promised Lands – a Religious History of Mennonites in Ontario*. Electronic document: <https://ontariomennonitehistory.org/2016/11/14/joseph-b-hagey-benjamin-ebys-successor/> last accessed November 25, 2021.
- Tanner, Helen (editor). 1987. *Atlas of Great Lakes Indian History*. University of Oklahoma Press.
- Tremaine, G.M. and G.R. Tremaine. 1861. *Map of the County of Waterloo, Canada West*. Geo. R. & G.M. Tremaine.
- Walker & Miles. 1877. *The Illustrated Historical Atlas of the County of Waterloo, Ont.* Walker & Miles.
- Warrick, G.A. .2000. The Precontact Iroquoian Occupation of Southern Ontario. *Journal of World Prehistory*, Vol.14, No.4: pp. 415-466.
- Warrick, G. 2013. The Aboriginal Population of Ontario in Late Prehistory. In M.K. Munson and Jamieson, S.M (editors), *Before Archaeology: The Archaeology of a Province*. McGill Queen's University Press.
- Weaver, Sally. 1978. Six Nations of the Grand River, Ontario. In B.G. Trigger (editor), *Handbook of North American Indians. Volume 15: Northeast*, pp. 525-536. Smithsonian Institution Press.
- Wester, M.C., B.L. Henson, W.J. Crins, P.W.C. Uhlig and P.A. Gray. 2018. The Ecosystems of Ontario, Part 2: Ecodistricts. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, ON. Science and Research Technical Report TR-26. 474 p. + appendices

8.0 Maps









9.0 Images

9.1 Field Photos

Photo 1: Agricultural field with pedestrian survey, facing north northwest	Photo 2: Agricultural field with pedestrian survey, facing south
 A photograph of a grassy field with scattered trees and a red car parked in the background. The field is covered in low-lying vegetation and some bare branches.	 A photograph of a grassy field with scattered trees and a red car parked in the background. The field is covered in low-lying vegetation and some bare branches.
Photo 3: Agricultural field with pedestrian survey, facing west	Photo 4: Agricultural field, facing south
 A photograph of a grassy field with scattered trees and a white house in the background. The field is covered in low-lying vegetation and some bare branches.	 A photograph of a grassy field with scattered trees and a white house in the background. The field is covered in low-lying vegetation and some bare branches.
Photo 5: Wetland in woods, facing east northeast	Photo 6: Wetland in woods, facing north northwest
 A photograph of a wetland area with scattered trees and a white house in the background. The field is covered in low-lying vegetation and some bare branches.	 A photograph of a wetland area with scattered trees and a white house in the background. The field is covered in low-lying vegetation and some bare branches.

Photo 7: Woods and thicket with test pit survey at 5m interval, facing south southeast



Photo 8: Sample test pit



Photo 9: Agricultural field with pedestrian survey, facing east



Photo 10: Agricultural field with pedestrian survey, facing west



Photo 11: Agricultural field with pedestrian survey, facing west southwest



Test Pit Photo 1: Sample Test Pit Showing Stratigraphy



Test Pit Photo 2: Sample Test Pit Showing Stratigraphy	(no photo)
	

9.2 Artifact Photos

Plate 1: Cat #14 top, Cat #12 bottom	Plate 2: Cat #11 top, Cat #2 middle, Cat #21 bottom
	
Plate 3: Cat #15	(no Photo)
	