



Stage 1 & 2 Archaeological Assessment

Elm Street Development
1029 Steele Street
Part of Lot 29, Concession 2
Geographic Township of Humberstone
City of Port Colborne
Regional Municipality of Niagara

Prepared for:
ePrime Construction Management

Licensee: Michael Golloher

PIFs:

P1037-0255-2024

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Original Report



Earthworks

ARCHAEOLOGICAL SERVICES INC.

Earthworks Archaeological Services Inc.
2365 Watts Road,
Haliburton, Ontario
K0M 1S0

October 24, 2024

Executive Summary

Earthworks Archaeological Services Inc. was retained to conduct a Stage 1 & 2 archaeological assessment of a 5.20 hectare area located at 1029 Steele Street and three additional unaddressed parcels, part of Lot 29, Concession 2, Geographic Township of Humberstone, City of Port Colborne, Regional Municipality of Niagara, historically part of Welland County, Ontario. The assessment was undertaken in support of a Plan of Subdivision Application and was conducted as part of the requirements defined in Section 7.3 of the City of Port Colborne Official Plan, which requires an archaeological assessment be submitted to the Ministry of Citizenship & Multiculturalism where development is proposed on areas of archaeological potential as determined by the City, the Region and/or the Ministry of Citizenship & Multiculturalism.

The study area contains evidence of archaeological potential. The location of the study area at the edge of Barrick Road, a historically mapped transportation route, and two historic Euro-Canadian archaeological sites, suggests there is potential for locating Historic Euro-Canadian archaeological material. In summary, a Stage 2 archaeological assessment was determined to be required in order to identify and document any archaeological material that may be present. A portion of the property is actively or recently cultivated land, and as a result, a combined Stage 2 pedestrian and test pit survey is determined to be required.

The Stage 2 archaeological assessment of the study area was conducted on May 14, 2024 under PIF #: P1037-0278-2024, issued to Michael Golloher, M.Sc. (P1037). The weather during the survey was a mix of sun and cloud and warm. The study area was ploughed and had been weathered by heavy rainfall. The topsoil was completely exposed, with an estimated surface visibility of 80-95% of the ploughed ground surface. At no time were weather or lighting conditions detrimental to the observation or recovery of archaeological material.

Approximately 68% of the study area was assessed through a pedestrian survey. Pedestrian survey transects were spaced at maximum intervals of 5 metres apart.

Approximately 31% of the study area was assessed through a test pit survey, with the remaining area not assessed due to evidence of subsurface disturbance from the construction of houses and associated outbuildings and gravel driveways, and the neighbouring road. Test pits were spaced at maximum intervals of 5 metres apart, and to within one metre of standing structures. Each test pit was excavated by hand to 30 centimetres in diameter and were excavated into the first 5 centimetres of subsoil. Test pit depth averaged 30 centimetres. Each test pit was examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All test pits were backfilled. The soil stratigraphy consisted of a brown clay topsoil horizon overlaying an orange clay subsoil.

A total of two archaeological locations were identified during the course of the Stage 2 pedestrian survey. Once initially identified, survey transects were reduced to 1 metre intervals over a minimum of a 20 metre radius around the finds to determine whether they were isolated finds or part of a larger scatter. This interval was continued, working outward until the full extent of the surface scatters were determined. A Controlled Surface Pickup was conducted, and all artifacts were mapped and recovered for analysis.

Based on the results of the Stage 1 background investigation and the subsequent Stage 2 archaeological assessment, the study area contains an archaeological site that has further

cultural heritage value and interest. Therefore, a Stage 3 site specific assessment is recommended for AfGt-349.

The Stage 3 site-specific assessments of AfGt-349 will consist of the excavation of one metre test units placed on a 5 metre grid established over the sites, and based on a permanent datum to at least the accuracy of transit and tape measurements. Placing test units in unmeasured, estimated locations will not be acceptable. Additional test units, amounting to 20% of the grid unit total will be placed and excavated, focusing on areas of interest within the site extent.

Test units will be excavated by hand, in systematic levels into the first 5 centimetres of the subsoil layer, unless excavation uncovers a cultural feature. If test excavation uncovers a feature, the feature's plan will be recorded, and geotextile fabric will be placed over the unit floor prior to backfilling the test unit.

All excavated soil will be screened through mesh with an aperture of no greater than 6 millimetres, and all artifacts will be collected and recorded according to their corresponding grid unit designation.

No further archaeological assessments are recommended for Location 1.

The Ministry of Citizenship & Multiculturalism is requested to review this report and provide a letter indicating their satisfaction that the fieldwork and reporting for this archaeological assessment are consistent with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

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Project Personnel

Managing Director:	Anthony Butler, M.Sc. (P310)
Licensed Archaeologist:	Michael Golloher, M.Sc. (P1037)
Licensed Field Director:	Kia Ohora, B.A. (R1303)
Field Technicians:	Gary Cole Jordan Steinmann (A1221)
Artifact Analysis and Photography:	Jordan Steinmann (A1221)
Report Production:	Shane McCartney, M.A. (P321)



1.0 Project Context

1.1 Development Context

Earthworks Archaeological Services Inc. (Earthworks) was retained to conduct a Stage 1 & 2 archaeological assessment of a 5.20 hectare area located at 1029 Steele Street and three additional unaddressed parcels, part of Lot 29, Concession 2, Geographic Township of Humberstone, City of Port Colborne, Regional Municipality of Niagara, historically part of Welland County, Ontario (Map 1). The assessment was undertaken in support of a Plan of Subdivision Application and was conducted as part of the requirements defined in Section 7.3 of the City of Port Colborne Official Plan, which requires an archaeological assessment be submitted to the Ministry of Citizenship & Multiculturalism where development is proposed on areas of archaeological potential as determined by the City, the Region and/or the Ministry of Citizenship & Multiculturalism (City of Port Colborne 2013:152)

The objectives of the Stage 1 & 2 archaeological assessment, as outlined by the Ministry of Citizenship and Multiculturalism's' (MCM) *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), are as follows:

- To provide information about the property's geography, history, previous archaeological fieldwork and current land condition
- To evaluate the property's archaeological potential.
- To document archaeological resources located on the property.
- To determine whether any identified archaeological resources require further assessment.
- To recommend Stage 3 assessment strategies for any archaeological sites determined to require additional assessment.

As part of this assessment, background research was conducted in Earthworks corporate library, the Niagara South/Niagara 30 Land Registry Office (LRO #59), and the Federal Canadian Census located online at Library and Archives Canada.

Permission to access the property was provided by the proponent

1.2 Historic Context

1.2.1 Pre-Contact Indigenous History

Table 1 provides a breakdown of the general culture history of southern Ontario, as based on Ellis and Ferris (1990)

Table 1 Summary of Pre-contact Indigenous Culture History of southern Ontario

Culture Period	Diagnostic Artifacts	Time Span (Years B.P.)	Detail
Early Paleo-Indian	Fluted Projectile Points	11,000-10,400	Nomadic caribou hunters
Late Paleo-Indian	Hi-Lo, Holcombe, Plano Projectile Points	10,400-10,000	Gradual population increase
Early Archaic	Nettling and Bifurcate Points	10,000-8,000	More localized tool sources
Middle Archaic	Brewerton and Stanly-Neville Projectile Points	8,000-4,500	Re-purposed projectile points and greater amount of endscrapers
Narrow Point Late Archaic	Lamoka and Normanskill Projectile Points	4,000-3,800	Larger site size
Broad Point Late Archaic	Genessee, Adder Orchard Projectile Points	3,800-3,500	Large bifacial tools. First evidence of houses
Small Point Late Archaic	Crawford Knoll, Innes Projectile Points	3,500-3,100	Bow and Arrow Introduction
Terminal Archaic	Hind Projectile Points	3,100-2,950	First evidence of cemeteries
Early Woodland	Meadowood Points, Cache Blades, and pop-eyed birdstones	2,950-2,400	First evidence of Vinette I Pottery
Middle Woodland	Pseudo-scallop shell	2,450-1550	Burial Mounds
	Princess Point pottery	1550-1100	First evidence of corn horticulture
Late Woodland	Levanna Point	1,100-700	Early longhouses
	Saugeen Projectile Points	700-600	Agricultural villages
	Nanticoke Notched Points	600-450	Migrating villages, tribal warfare



1.2.2 Post-Contact Indigenous History

The surrounding area enters the historic record in 1626, when Father La Roche Daillon, a French Jesuit missionary, spent three months in the Hamilton region attempting to conclude a trading alliance with the Neutral Confederacy. These negotiations ultimately failed due to opposition from Huron allies (White 1978:409). By 1638, the Neutral had expanded east to the Niagara River in response to a void left by the Wenro migrating to Huronia and the Erie migrating southwest. By the early 1640s, the Neutrals were engaged in large scale warfare with the Assistaeronons to the west while maintaining a neutral stance between the Huron and the League of Five Nations Iroquois. European influence in the region was generally restricted to the beaver pelt trade, and Aboriginal groups practiced a way of life that did not differ significantly from the pre-Contact period. By the late 1640's, the increasing scarcity of beaver pelts prompted the invasion of the Neutral by the League of Five Nations Iroquois. By 1651, the Neutral Confederacy was destroyed and its members either moved west out of Ontario or were absorbed into the League of Five Nations (Trigger 1994:57).

The region appears to have been relatively unpopulated by permanent settlements in the latter half of the seventeenth century, with much of southern Ontario used as a hunting territory by the Iroquois. However, Ojibway groups previously thought to have settled along the northern shores of Georgian Bay and Lake Superior gradually migrated into southern Ontario, and by 1707 had settled in the Niagara region (Rogers 1978:761).

By 1784, the British government purchased from the Mississauga over a million hectares of land between Lake Ontario and Lake Erie, which became known as the Between the Lakes Purchase (Surtees 1994:102). The Mississauga eventually relocated to the Grand River at New Credit in 1847.

1.2.3 European Settlement History

The study area is located in the historic Geographic Township of Humberstone, which was first surveyed in 1794 by T. Welch (Winearls 1991:516). The earliest European settlement occurred in 1781, when Christian Stoner arrived from Pennsylvania, and was soon followed by United Empire Loyalist families following the conclusion of the American Revolutionary War in 1783 (WTPH 1887: 277). Economic activity centred around agricultural production due to the presence of fertile, easily worked soils, and the township contained 75 houses and one grist and saw mill by 1817. The construction of the Welland Canal in 1832 spurred the construction of a permanent settlement at the terminus of the Canal, and the village lots for Port Colborne were laid out in 1834 (Mika & Mika 1981:232). Initial economic activity depended on the operation of the canal before becoming an important industrial centre for the region, and in 1870 Port Colborne was incorporated as a village with a population of 1,030. Port Colborne continued as a regional hub, containing a grain elevator and functioning as the southern terminus of the Welland Railway and an important station on the Buffalo and Goderich Division of the Grand Trunk Railway before becoming a town in 1818 with a population of 5,000. Port Colborne was incorporated as a City in 1966, and in 1970 amalgamated a portion of the township of Humberstone into the wider Regional Municipality of Niagara.

1.2.4 Land Use History of Study Area

The study area is located within Lot 29, Concession 2 of the Geographic Township of Humberstone, which was first granted to Abraham Neff in 1798. Mr. Neff was one of the earliest settlers in the region, having arrived in Upper Canada in 1781 (WTPH 1887). While Abraham Neff died in 1810, the property remained in the possession of the Neff family through the first half of the nineteenth century. The agricultural census documents for Humberstone are missing for 1851 and 1861, and the 1862 Tremaine's Map of the Counties of Lincoln and Welland does not list an owner (Map 2, Tile 1). A northern section of the lot was parcelled off and sold to Earnest Woodruff in 1865, who sold it to Francis Barrick in 1868. The 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland show the study area straddling two properties owned by a J. Barrick and E. Neff (Map 2, Tile 2). The 1871 census lists an Elihah Neff an Ontario born farmer who owned 112 acres of Lots 28 and 29 and had cleared his property for agriculture (Government of Canada 1871a:27; 1871b:5). Analysis of historic aerial imagery indicates the study area remained as primarily agricultural land with gradual additions of single family homes along the western edge during the twentieth century (Map 3).

1.3 Archaeological Context

1.3.1 Current Conditions

The study area consists of a mix of a residential lot backing onto a ploughed agricultural field and the western shoulder off Elm Street. A dog burial with a cross gravestone was also present (Images 1 thru 16).

1.3.2 Natural Environment

The study area is situated within a clay plain (Map 4) of the Haldimand Clay Plain physiographic region, a 3500 square kilometre area consisting of a series of parallel clay belts deposited during the time of glacial Lake Warren and includes dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins (Chapman and Putnam 1984: 156-157). The surficial geology consists of clay and silt (Map 5), and the soil mapping of the region indicates the study area was not mapped (Kingston and Present 1989).

The nearest natural water source is Lake Erie, located approximately 3 kilometres to the south of the study area.

The study area is located within the Niagara District of the Lake Erie – Lake Ontario Ecoregion, which itself is situated within the Mixedwood Plains Ecozone. This region encompasses 2,185,845 hectares, and contains a diverse array of flora and fauna. It is characterized by a mix of Carolinian forest remnants of tulip-tree, black gum, sycamore, Kentucky coffee-tree, pawpaw, various oaks and hickories, and common hackberry, in addition to the more widespread sugar maple, American beech, white ash, eastern hemlock, and eastern white pine.

Typical mammals inhabiting this ecoregion include white-tailed deer, northern raccoon, striped skunk, and the Virginia opossum which has increased its

distribution and abundance since the latter half of the 20th century. Characteristic birds include green heron, Virginia rail, Cooper's hawk, eastern kingbird, willow flycatcher, brown thrasher, yellow warbler, common yellowthroat, northern cardinal, and savannah sparrow. Wild turkey has been re-introduced into the ecoregion. Herpetofauna, is diverse, including several provincially rare species (e.g., spiny softshell turtle), as well as more frequent species such as eastern red-backed salamander, American toad, eastern gartersnake, and Midland painted turtle. Longnose gar, channel catfish, smallmouth bass, yellow perch, walleye, northern hogsucker, banded killifish, and spottail shiner are among the fish species found in the lakes and rivers in this ecoregion.

(Crins et al. 2009:52)

1.3.3 Known Archaeological Sites

A search of registered archaeological sites within the MCM Archaeological Sites Database was conducted. A total of 27 archaeological sites were identified within a one kilometre radius of the study area. A summary is provided below:

Table 2: Summary of Registered Archaeological Sites within One kilometre of the Study Area

Borden Number	Site Name	Time Period	Affinity	Site Type
AfGt-90	McIntyre-Evans	Archaic, Middle	Aboriginal	Othercamp/campsite
AfGt-89	Meadow Heights I	Archaic, Late	Aboriginal	Othercamp/campsite
AfGt-79	-	Pre-Contact	Aboriginal	Othercamp/campsite
AfGt-78	-	Pre-Contact	Aboriginal	Othercamp/campsite
AfGt-77	-	Pre-Contact	Aboriginal	Othercamp/campsite
AfGt-76	-	Pre-Contact	Aboriginal	Othercamp/campsite
AfGt-75	-	Pre-Contact	Aboriginal	Othercamp/campsite
AfGt-74	-	Pre-Contact	Aboriginal	Othercamp/campsite



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Borden Number	Site Name	Time Period	Affinity	Site Type
AfGt-73	-	Other		Othertoolmanufacturing
AfGt-72	Salsbury/Loyalist Park	Archaic	Aboriginal	
AfGt-348	M1	Post-Contact	Aboriginal, Euro-Canadian	farmstead
AfGt-343	C6	Pre-Contact	Aboriginal	quarry
AfGt-337		Pre-Contact	Aboriginal	camp / campsite
AfGt-233	Barrick Road Site	Paleo-Indian		camp / campsite
AfGt-201	Port Colborne P1 site	Pre-Contact	Aboriginal	camp / campsite
AfGt-197	Chippawa 2	Pre-Contact	Aboriginal	
AfGt-196	Chppawa1	Pre-Contact	Aboriginal	
AfGt-143		Other		Otherfindspot_
AfGt-142				
AfGt-141				
AfGt-140				
AfGt-139				
AfGt-138				
AfGt-137				
AfGt-136				
AfGt-135				
AfGt-1	Colborne Quarry	Archaic	Aboriginal	Othertoolmanufacturing

Archaeological sites AfGt-348 and AfGt-201, two historic Euro-Canadian archaeological sites, are located within 300 metres of the study area

1.3.4 Adjacent Archaeological Assessments

No archaeological assessments conducted within 50 metres of the study area were identified.

1.4 Summary

As documented in Section 1.0 the study area contains evidence of archaeological potential. The location of the study area at the edge of Barrick Road, a historically mapped transportation route, and two historic Euro-Canadian archaeological sites, suggests there is potential for locating Historic Euro-Canadian archaeological material. In summary, a Stage 2 archaeological assessment was determined to be required in order to identify and document any archaeological material that may be present. A portion of the property is actively or recently cultivated land, and as a result, a combined Stage 2 pedestrian and test pit survey is determined to be required.



2.0 Field Methods

The Stage 2 archaeological assessment of the study area was conducted on May 14, 2024 under PIF #: P1037-0278-2024, issued to Michael Golloher, M.Sc. (P1037). The weather during the survey was a mix of sun and cloud and warm. The study area was ploughed and had been weathered by heavy rainfall. The topsoil was completely exposed, with an estimated surface visibility of 80-95% of the ploughed ground surface (Image 17). At no time were weather or lighting conditions detrimental to the observation or recovery of archaeological material.

Approximately 68% of the study area was assessed through a pedestrian survey (Image 18). Pedestrian survey transects were spaced at maximum intervals of 5 metres apart.

Approximately 31% of the study area was assessed through a test pit survey (Image 19), with the remaining area not assessed due to evidence of subsurface disturbance from the construction of houses and associated outbuildings and gravel driveways, and the neighbouring road. Test pits were spaced at maximum intervals of 5 metres apart, and to within one metre of standing structures. Each test pit was excavated by hand to 30 centimetres in diameter and were excavated into the first 5 centimetres of subsoil. Test pit depth averaged 30 centimetres. Each test pit was examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All test pits were backfilled. The soil stratigraphy consisted of a brown clay topsoil horizon overlaying an orange clay subsoil (Image 20).

A total of two archaeological locations were identified during the course of the Stage 2 pedestrian survey. Once initially identified, survey transects were reduced to 1 metre intervals over a minimum of a 20 metre radius around the finds to determine whether they were isolated finds or part of a larger scatter. This interval was continued, working outward until the full extent of the surface scatters were determined. A Controlled Surface Pickup was conducted, and all artifacts were mapped and recovered for analysis.

Archaeological material that was identified was recorded in UTM coordinates with a Trimble Catalyst employing the North American Datum 83, with a stated real time accuracy of 1 metre.

The results of the Stage 2 archaeological survey are presented in Map 6.



3.0 Record of Finds

Table 3 provides an inventory of the documentary record generated in the field

Table 3 Information Inventory of Documentary Record

Document	Location	Description
Field Notes	Earthworks Office Project File	1 page of notes
Photographs	Earthworks Office Project File	26 digital photographs
Field Map	Earthworks Office Project File	1 map
UTM Coordinates	Earthworks Office Project File	85 Coordinates

The recovered artifacts were washed, catalogued, and analyzed and are currently stored in one banker's box, measuring 40.0 x 31.5 x 25 centimetres at the Earthworks Corporate Storage Unit. The artifacts and documents will be stored by Earthworks until arrangements can be made to transfer them to an MCM approved storage facility.

The Parks Canada's Database Artifact Inventory Guide was used as a template during the cataloguing phase of artifact analysis and was modified accordingly. This guide classifies artifacts according to specific functional classes, subgroups, and types. Classes are intended to reflect related behaviour and general function-related activities. For example, Classes used include "Foodways" and include artifacts related to all aspects of food preparation, storage and consumption. Likewise, the "Architectural" class is a catch-all category for items such as brick, nails, window glass, etc. These Classes are further subdivided into Groups reflecting more specialized activities. The "Architectural" class, for example, includes groups such as construction materials, nails and window glass. Groups are then further refined into "Types", defined by attributes that are either functionally or temporally diagnostic, and so on. By classifying archaeological material in this manner, general trends can be discerned concerning on how an area was used in the past. A sample of artifacts recovered from the Stage 2 survey are presented in Images 21 thru 23, and the complete artifact catalogue is presented in Appendix A.

3.1 Terms of Reference

This section provides definitions of the artifact terms utilized in the site artifact catalogues and descriptions.

3.1.1 *Lithic Artifact Categories*

Formal Lithic Tool: Intentionally fashioned, bifacially worked tools manufactured for a specific activity or use. Can include hafted scrapers, bifaces, projectile points, etc. Biface tool classifications follow the four-stage biface production process as defined by Fisher (1989:25-29).

Lithic Debitage: Represents the waste material that is discarded during the manufacture of lithic tools such as projectile points or bifaces, and can be divided into subcategories based on the lithic reduction stage:

Tertiary Flakes: representing a switch from decortication to biface thinning, these flakes are represented by small striking platforms at a 90 degree angle, with no cortex present and a large amount of dorsal scarring.

Biface thinning flakes are smaller and much thinner than initial tertiary flakes, the main difference being the acute angle of the striking platform, which can be between 40 and 60 degrees.

Shatter: usually consists of thick, blocky pieces of chert which lack striking platforms and ventral flake surface attributes.

3.1.2 *Lithic Material Types*

All artifacts were manufactured on Onondaga chert, a high-quality chert that forms part of the Onondaga Formation, and outcrops along the north shore of Lake Erie and along the Onondaga Escarpment between Cayuga and Hagersville (Telford and Tarrant 1975). This material can also be recovered from secondary, glacial deposits across much of southwestern Ontario (Eley and von Bitter 1989; Fox 2009:361-362).



3.2 Location 1

Location 1 was identified during the Stage 2 pedestrian survey of the eastern edge of the ploughed agricultural field. It consists of an isolated utilized flake manufactured on Onondaga Chert.

3.3 AfGt-349

AfGt-349 was identified during the Stage 2 pedestrian survey of the southern agricultural field. A total of 18 artifacts were recovered from an area measuring 12 metres (N-S) by 10 metres (E-W). A summary is presented in Table 5

Table 4: Summary of Artifacts recovered from AfGt-349.

Artifact Class	Artifact Group	Artifact Type	Chert Type	Freq.	%
Pre-Contact Indigenous Artifacts					
Indigenous	Formal Lithic Tool	<i>Projectile Point</i>	<i>Onondaga</i>	1	5.56
		<i>Scraper</i>	<i>Onondaga</i>	1	5.56
		Subtotal		2	11.11
	Lithic Debitage	<i>Tertiary Flake</i>	<i>Onondaga</i>	1	5.56
		<i>Biface Thinning Flake</i>	<i>Onondaga</i>	1	5.56
		<i>Shatter</i>	<i>Onondaga</i>	1	5.56
		<i>Flake Fragment</i>	<i>Onondaga</i>	8	44.44
			<i>Burnt Onondaga</i>	5	27.78
	Subtotal		16	88.89	
	GRAND TOTAL				18

Cat. 86 is a side notched projectile point measuring 40.9 millimetres in length, 24 millimetres in width and is 7 millimetres thick. Its morphological characteristics are consistent with a Late Archaic Innes projectile point, which dates from 3,500 to 2,900 years B.P. (Ellis et al. 1990:109)

Cat. 102 is a side scraper fragment. It appears the ventral side was broken, leaving evidence of bevelling along the dorsal side of one lateral edge. It measures 36 millimetres in length, 31.2 millimetres in width, and is 8.3 millimetres thick.



4.0 Analysis & Conclusions

A Stage 1 & 2 Archaeological Assessment was conducted on a 5.20 hectare area located at 1029 Steele Street and three additional unaddressed parcels, part of Lot 29, Concession 2, Geographic Township of Humberstone, City of Port Colborne, Regional Municipality of Niagara, historically part of Welland County, Ontario. The combined Stage 2 pedestrian and test pit survey was conducted on May 14, 2024.

The Stage 2 archaeological assessment resulted in the identification of four Pre-Contact Indigenous archaeological locations.

4.1 Location 1

Location 1 consists of an isolated informal lithic tool. Consultation of Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists* indicates Location 3 does not meet the criteria for further cultural heritage value or interest, and as a result no additional archaeological assessments are required.

4.2 AfGt-349

AfGt-349 consists of a scatter of lithic debitage. It likely represents a small campsite associated with the larger use and travel over the landscape by successive generations of Pre-Contact Indigenous groups, and dates to the terminal period the Late Archaic circa 3,500 – 2,900 based on the recovery of an Innes projectile point. A portion of Location 4 contains 10 non-diagnostic artifacts within a 10 metre by 10 metre pedestrian survey area. Consultation of Section 2.2, Standard 1 (a) of the *Standards and Guidelines for Consultant Archaeologists* indicates that Location 4 meets the criteria for additional cultural heritage value or interest, and additional archaeological assessments are required. A larger sample of chronologically diagnostic archaeological material from a Stage 3 archaeological assessment is required in order to more accurately determine whether Location 4 meets the criteria for Stage 4 mitigation, as per Section 3.4 of the *Standards and Guidelines for Consultant Archaeologists*.

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4.3 Stage 2 Artifact Catalogue

Cat. #	Field ID	Location ID	Context (TS/SS/LOT)	Artifact Class	Artifact Group	Artifact Type	Lithic Material Type	Freq.	Comment
1	1	Location 1	CSP	Indigenous	Informal Lithic Tool	Utilized Flake	Onondaga	1	
2	2	AfGt-349	CSP	Indigenous	Formal Lithic Tool	Projectile Point	Onondaga	1	Innes Projectile Point - 40.9 mm in length, 24 mm width, 7 mm thick
3	3	AfGt-349	CSP	Indigenous	Lithic Debitage	Tertiary Flake	Onondaga	1	
4	4	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
5	5	AfGt-349	CSP	Indigenous	Lithic Debitage	Shatter	Onondaga	1	
6	6	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
7	7	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Burnt Onondaga	1	
8	8	AfGt-349	CSP	Indigenous	Lithic Debitage	Biface Thinning Flake	Onondaga	1	
9	9	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Burnt Onondaga	2	
10	10	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Burnt Onondaga	1	
11	11	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Burnt Onondaga	1	
12	12	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
13	13	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
14	14	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Burnt Onondaga		
15	15	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
16	16	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
17	17	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	
18	18	AfGt-349	CSP	Indigenous	Formal Lithic Tool	Scraper	Onondaga	1	Side scraper, usewear and retouch along one lateral edge. 36 mm in length, 31.2 mm in width, 8.3 mm thick
19	19	AfGt-349	CSP	Indigenous	Lithic Debitage	Flake Fragment	Onondaga	1	

5.0 Recommendations

Based on the results of the Stage 1 background investigation and the subsequent Stage 2 archaeological assessment, the study area contains an archaeological site that have further cultural heritage value and interest. Therefore, a Stage 3 site specific assessment is recommended for AfGt-349.

The Stage 3 site-specific assessments of AfGt-349 will consist of the excavation of one metre test units placed on a 5 metre grid established over the sites, and based on a permanent datum to at least the accuracy of transit and tape measurements. Placing test units in unmeasured, estimated locations will not be acceptable. Additional test units, amounting to 20% of the grid unit total will be placed and excavated, focusing on areas of interest within the site extent.

Test units will be excavated by hand, in systematic levels into the first 5 centimetres of the subsoil layer, unless excavation uncovers a cultural feature. If test excavation uncovers a feature, the feature's plan will be recorded, and geotextile fabric will be placed over the unit floor prior to backfilling the test unit.

All excavated soil will be screened through mesh with an aperture of no greater than 6 millimetres, and all artifacts will be collected and recorded according to their corresponding grid unit designation.

No further archaeological assessments are recommended for Location 1.

The MCM is requested to review this report and provide a letter indicating their satisfaction that the fieldwork and reporting for this archaeological assessment are consistent with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.



6.0 Advice on Compliance with Legislation

This report is submitted to the Ministry of Citizenship and Multiculturalism 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 Minister of Citizenship and Multiculturalism a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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

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.

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.



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8.0 Images



Image 1: Study Area Conditions. Facing East.



Image 2: Study Area Conditions. Facing North.



Earthworks Archaeological Services Inc.
Stage 1 & 2 Archaeological Assessment
1029 Steele Street
Port Colborne



Image 3: Study Area Conditions. Facing Southeast.



Image 4: Study Area Conditions. Facing Southeast.



Image 5: Study Area Conditions. Facing West.



Image 6: Study Area Conditions. Facing East.





Image 7: Study Area Conditions. Facing West.



Image 8: Study Area Conditions. Facing Northeast.





Image 9: Study Area Conditions. Facing West.



Image 10: Study Area Conditions. Facing South.





Image 11: Study Area Conditions. Facing West.



Image 12: Study Area Conditions. Facing North.





Image 13: Study Area Conditions. Facing South.



Image 14: Study Area Conditions. Facing North.



Image 15: Study Area Conditions. Facing South.



Image 16: Study Area Conditions. Facing North.





Image 17: Stage 2 Pedestrian Survey Surface Visibility Conditions



Image 18: Stage 2 Pedestrian Survey in Progress. Facing Southwest.





Image 19: Stage 2 Test Pit Survey in Progress. Facing East.



Image 20: Open Test Pit showing Subsurface Stratigraphy.



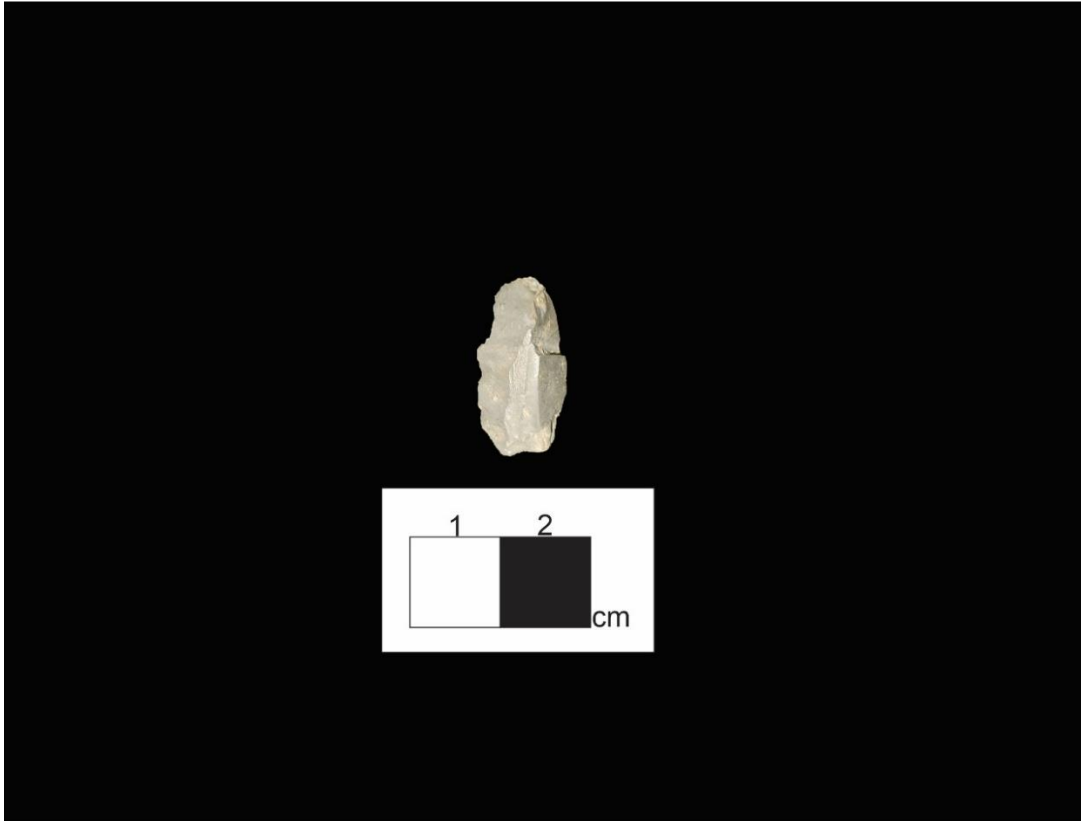


Image 21: Location 1 Artifact

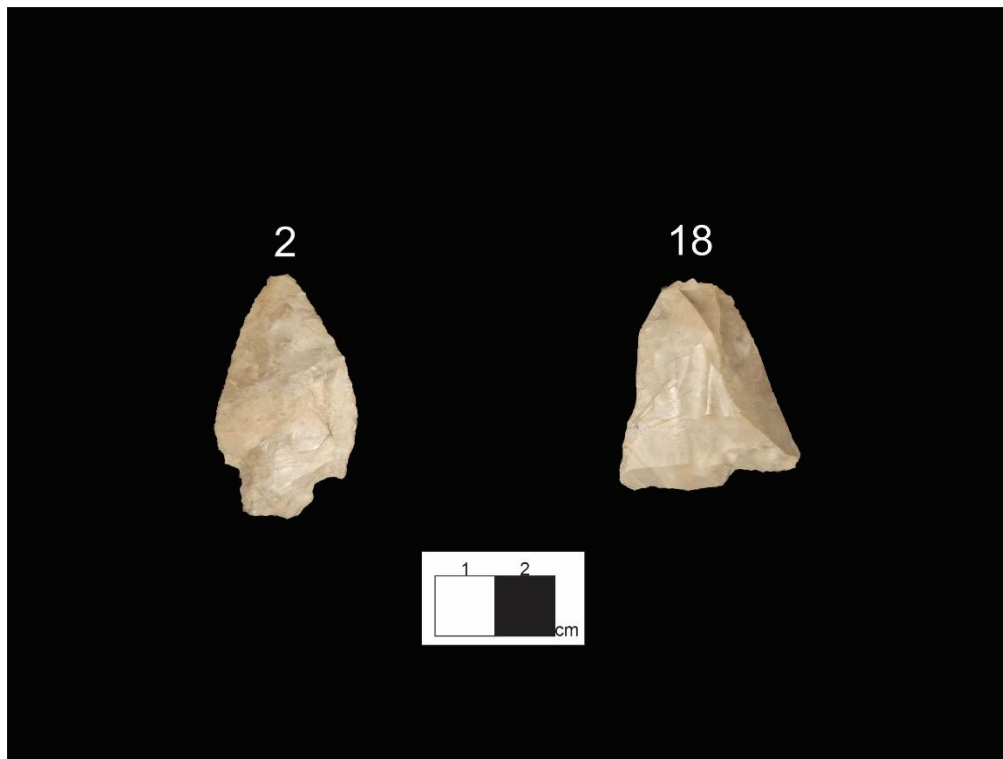


Image 22: Sample of AfGt-349 Artifacts.

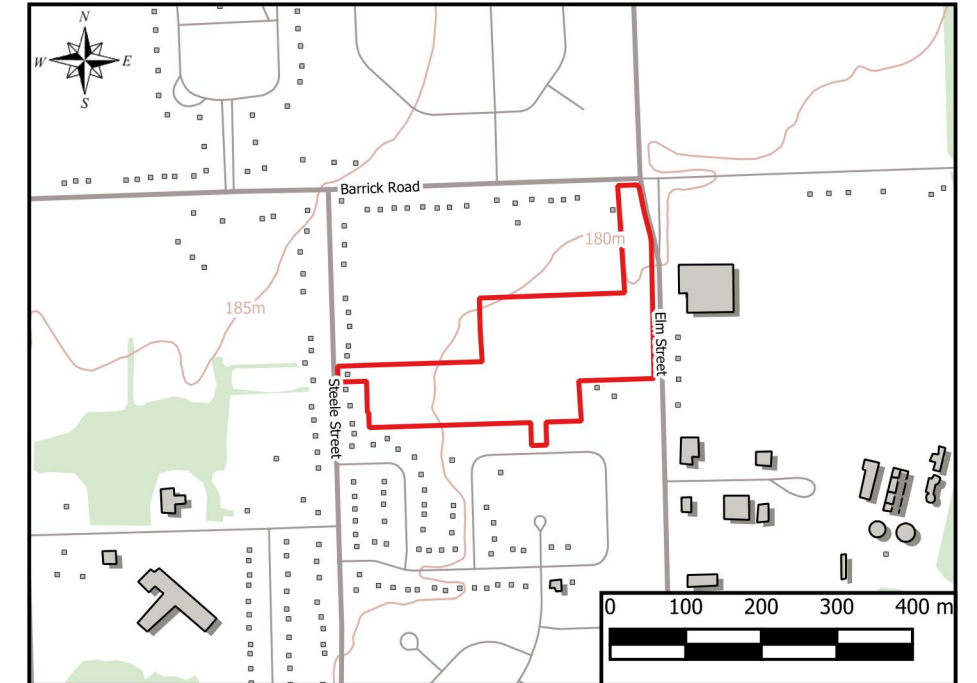
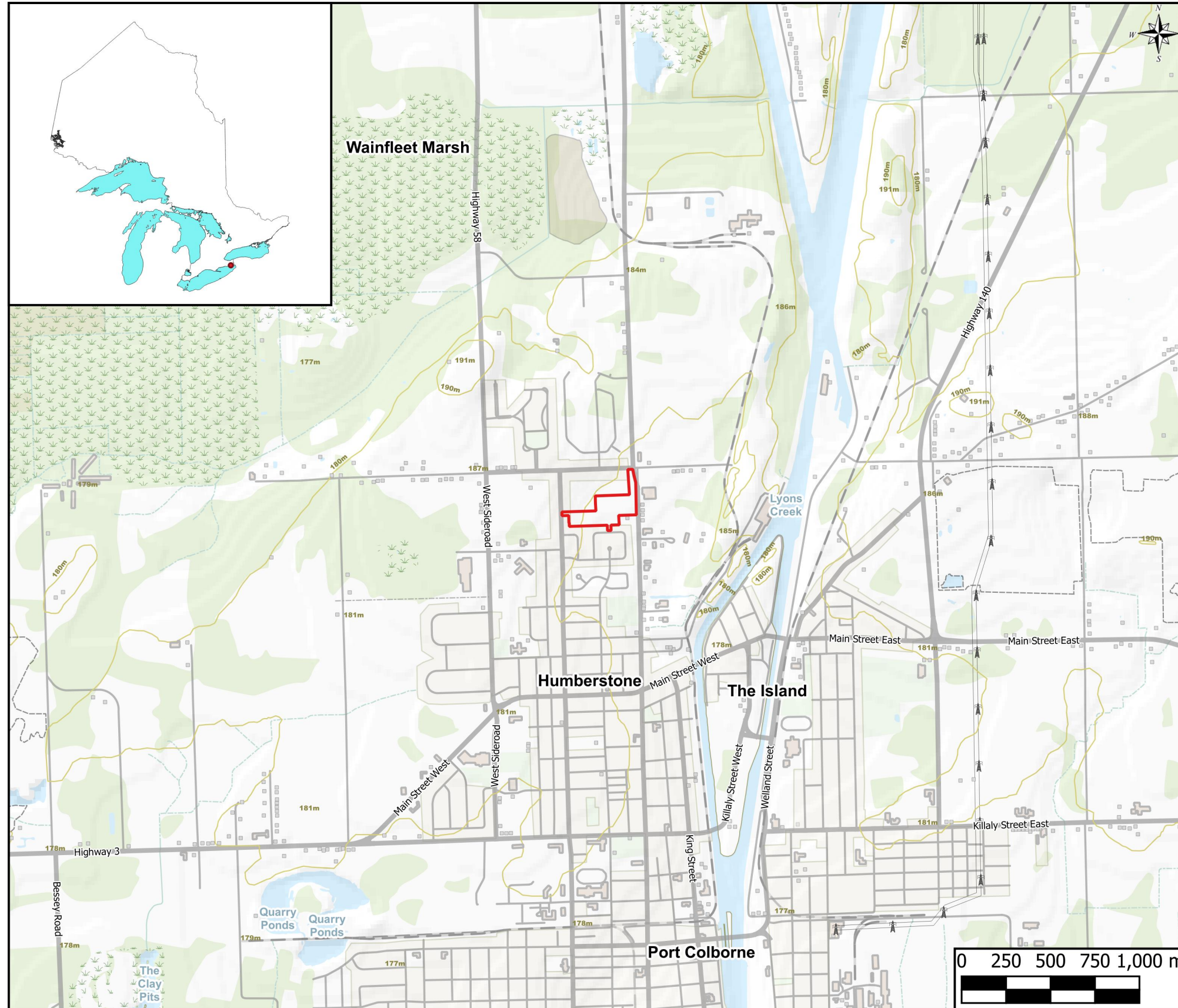


Image 23: Sample of AfGt-349 Artifacts.

9.0 Maps



Earthworks Archaeological Services Inc.
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 Port Colborne



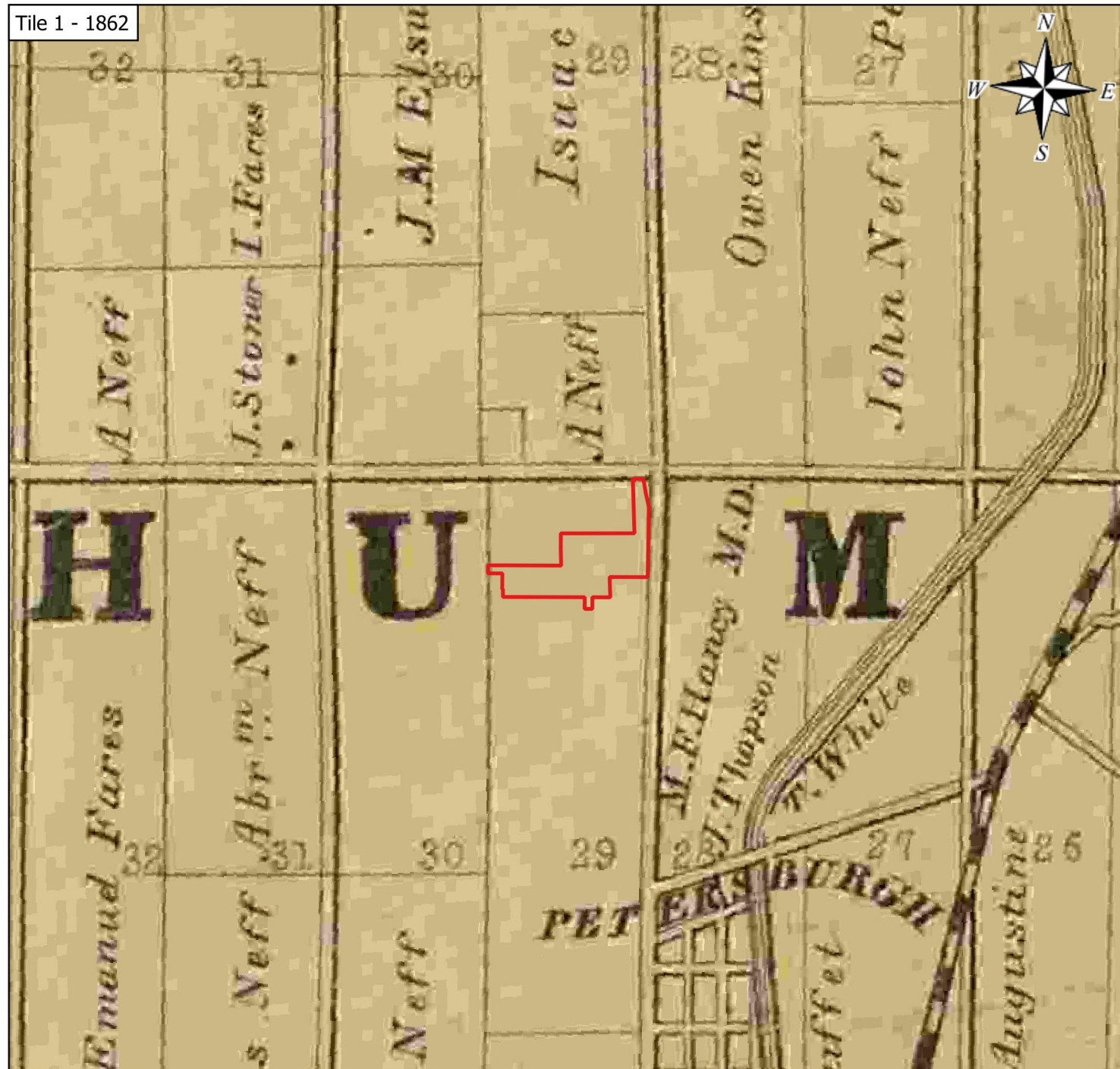
Legend

Study Area

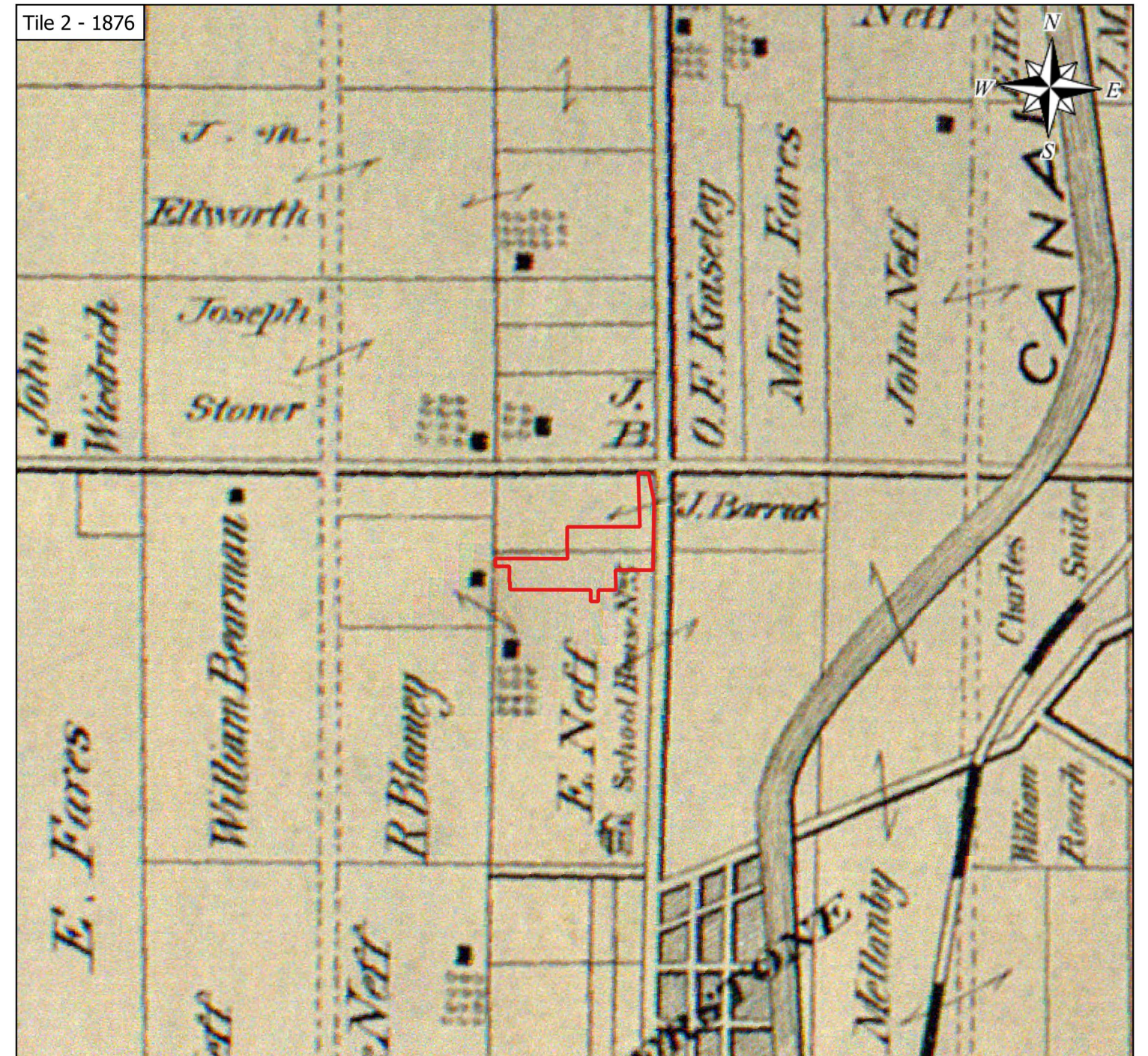
Reference:
 Canvec Data. Scale 1:50000
 Ontario Basic Mapping. Scale 1:10000
 Niagara Region 2023 Aerial Imagery

Map 1: Regional Map

Tile 1 - 1862



Tile 2 - 1876



Legend

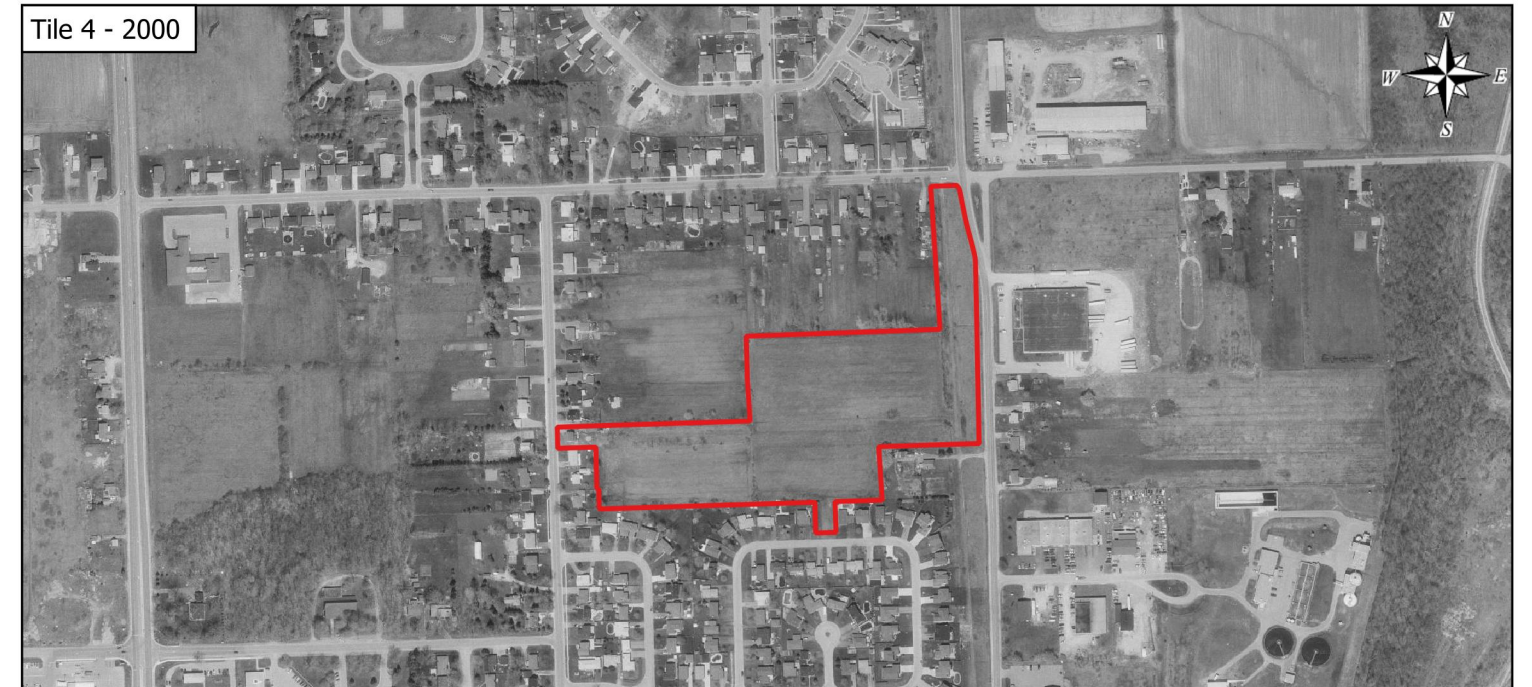
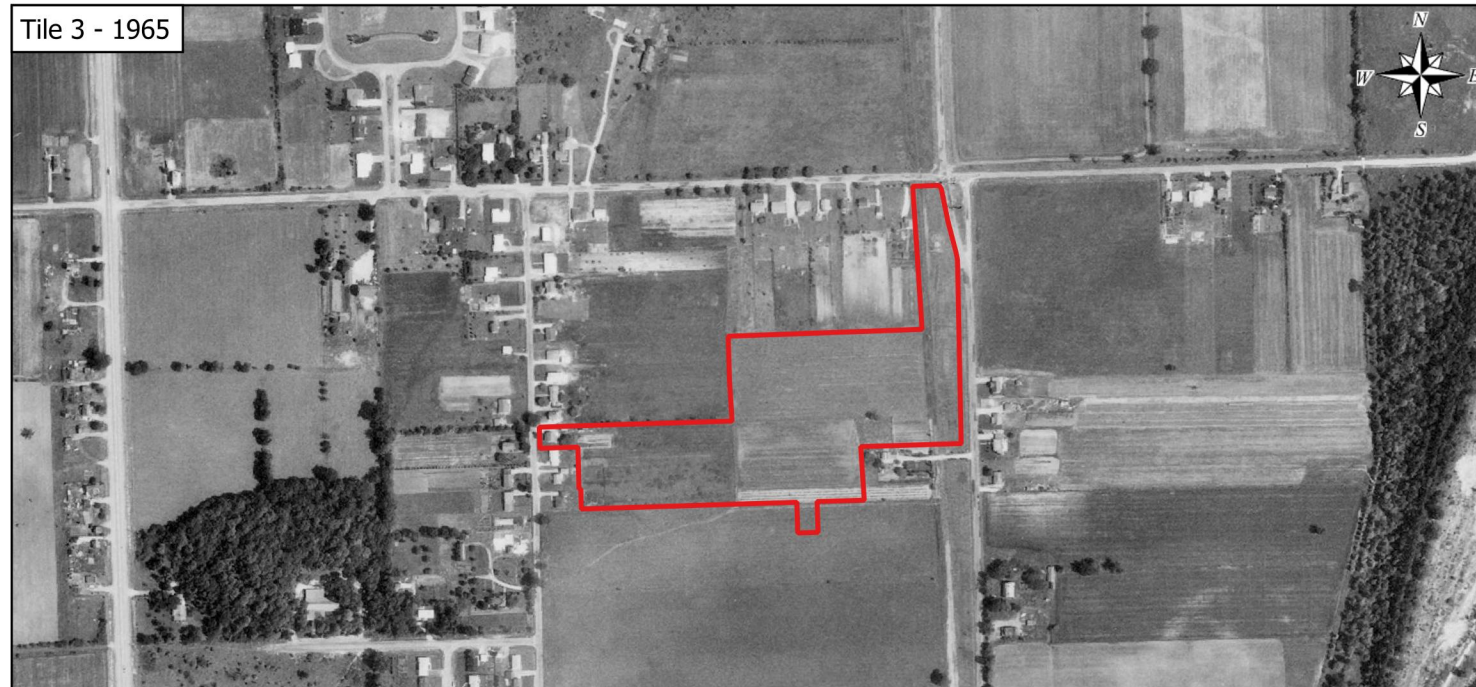
 Study Area

Not to Scale

Tile 1 - Tremaine's Map of the Counties of Lincoln and Welland, Canada West. Compiled and Drawn from actual surveys by the Publishers Geo. R. Tremaine & G.M. Tremaine. Toronto, 1862.

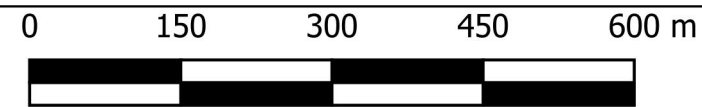
Tile 2 - Illustrated historical atlas of the counties of Lincoln & Welland, Ont. H.R. Page & Co. 1876

Map 2: Nineteenth Century Historic Mapping



Legend

 Study Area



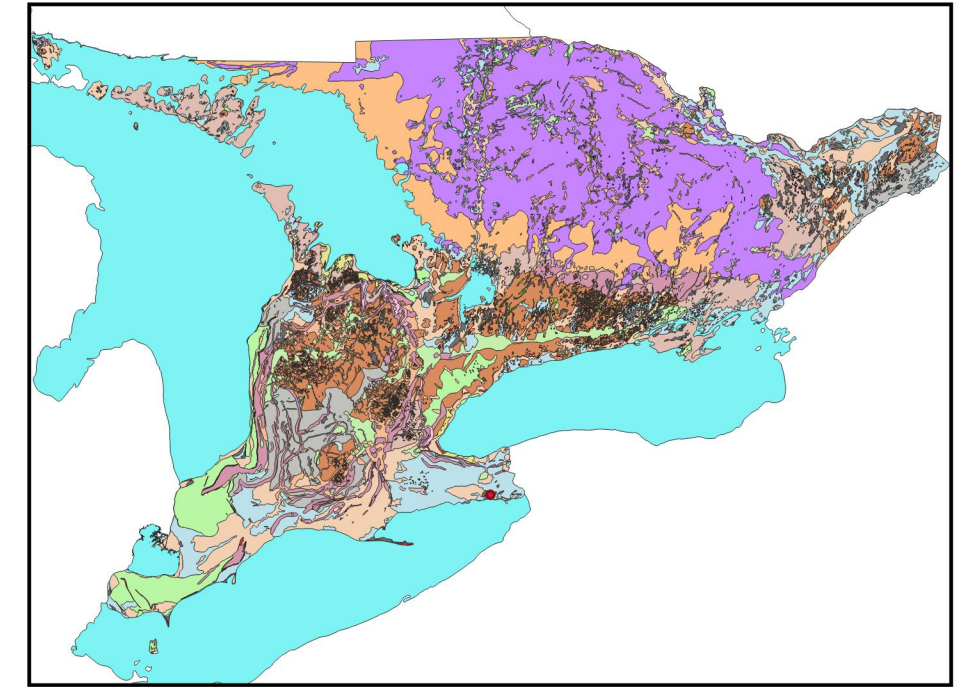
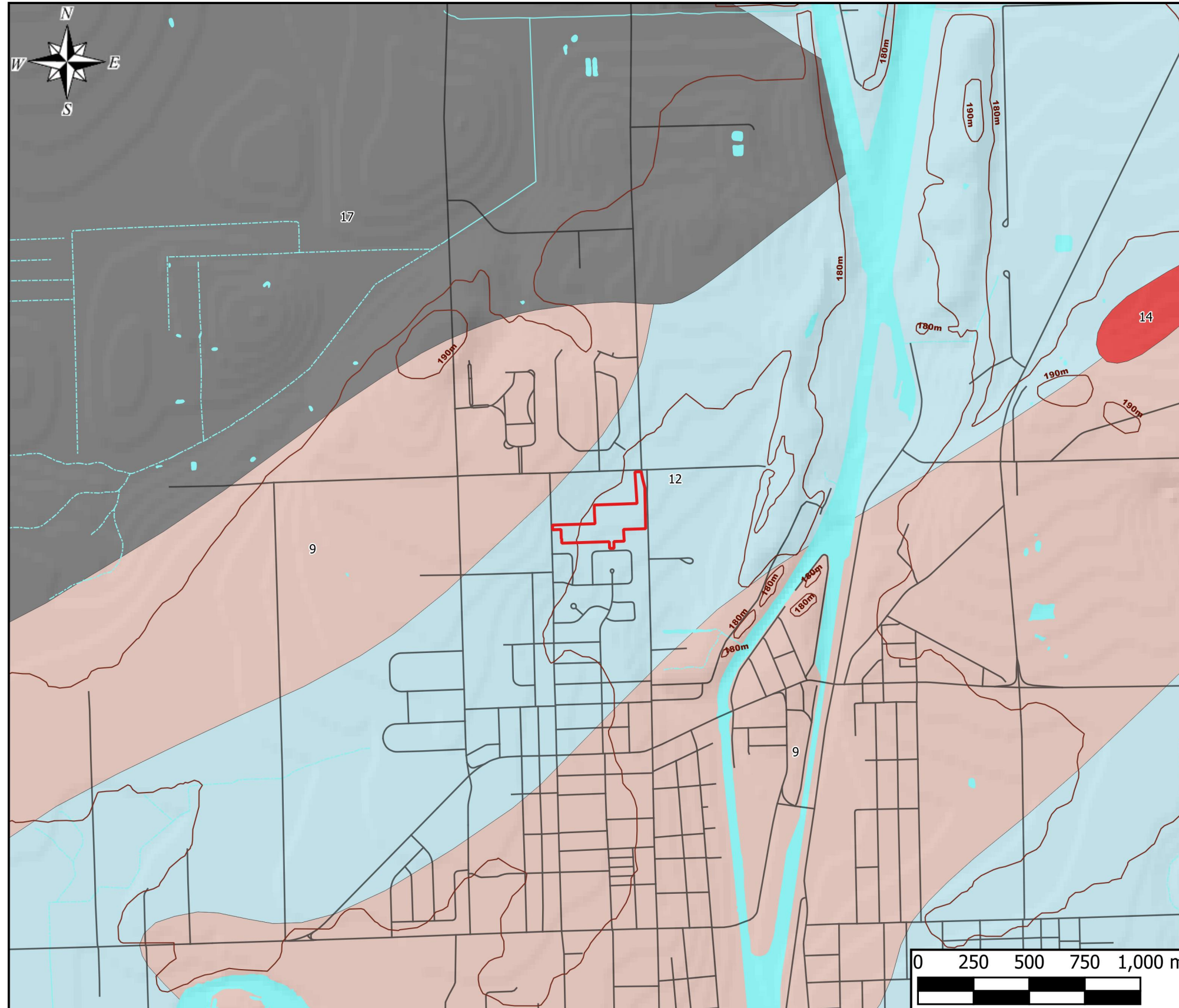
Tile 1 - Niagara Region 1934 Aerial Imagery

Tile 2 - Niagara Region 1954 Aerial Imagery







Tile 3 - Niagara Region 1965 Aerial Imagery

Tile 4 - Niagara Region 2000 Aerial Imagery

Map 3: Twentieth Century Aerial Imagery

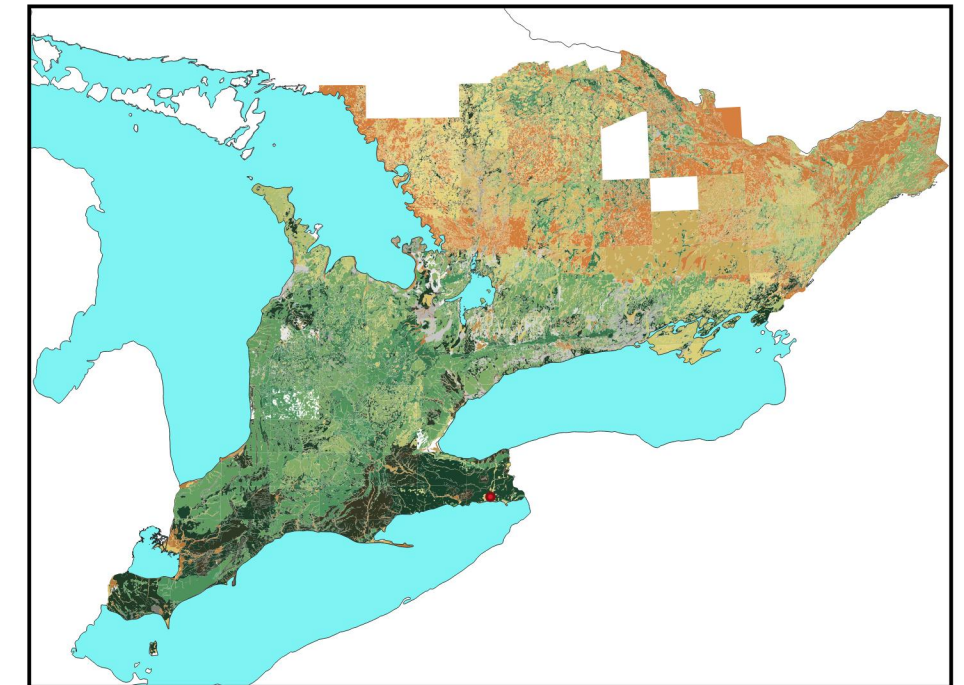
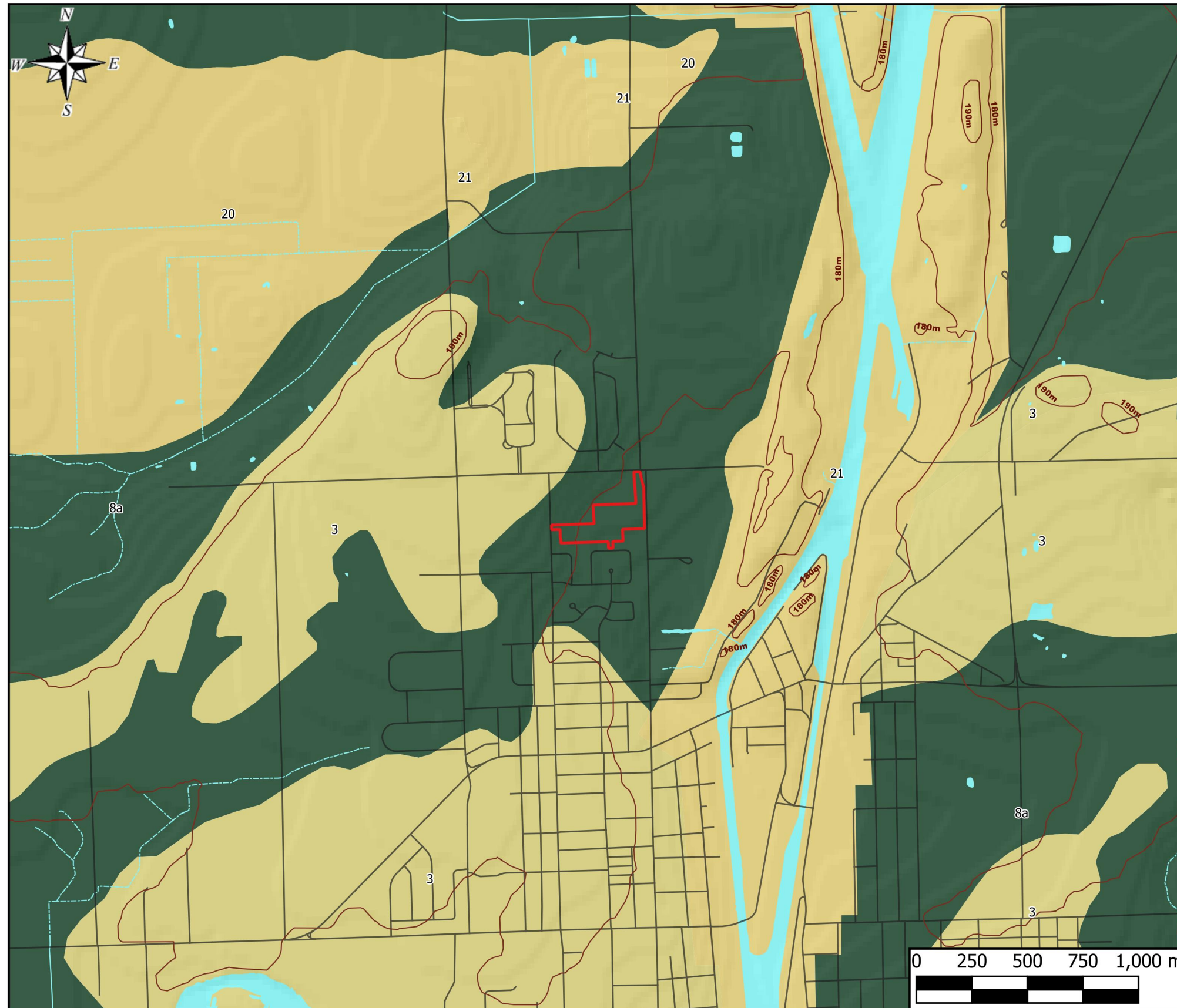


Legend

-  Study Area
-  Road Network
-  9 - Limestone Plains
-  12 - Clay Plains
-  14 - Beaches
-  17 - Peat And Muck

Base Data:
Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release—
Data 228.

Map 4: Physiographic Landforms

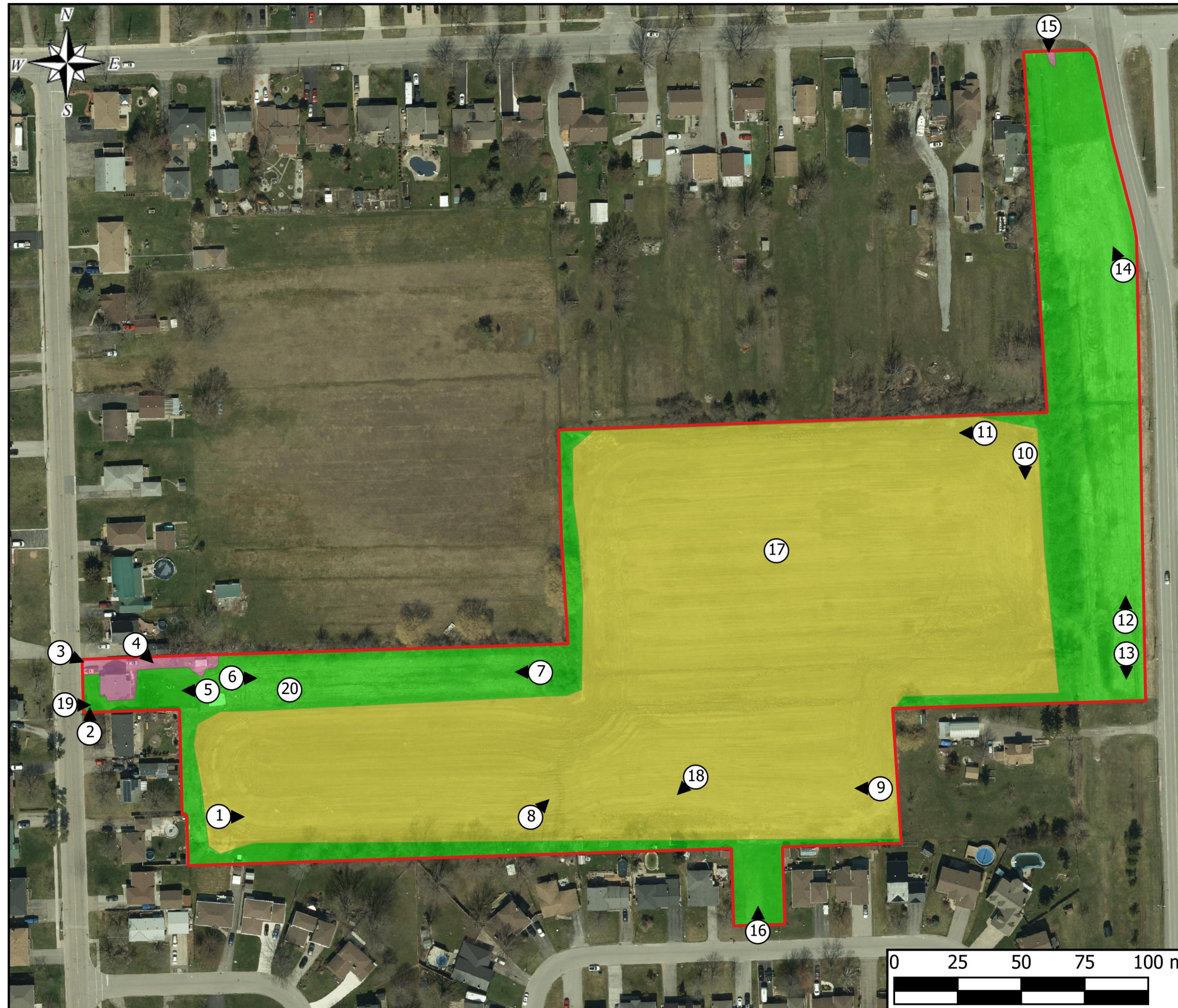


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



- Study Area
- Road Network
- 3 - Cherty limestone
- 3 - Dolostone
- 8a - Clay and silt
- 20 - Unsubdivided muck, peat, and less organic-rich clay silt and sand
- 21 - Fill

Base Data:
 Ontario Geological Survey 2010. Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV ISBN 978-1-4435-2483-4

Map 5: Surficial Geology



Legend

-  Study Area
-  Area Subject to Stage 2 Test Pit Survey at 5 metre intervals
-  Area Subject to Stage 2 Pedestrian Survey at 5 metre Intervals
-  Area of Subsurface Disturbance - Not Assessed
-  Photo Location and Direction

Reference:
Niagara Region 2023 Aerial Imagery

**Map 6: Stage 2
Assessment Results**