APPENDIX F

Archaeological Assessments



Stage 1-2 Archaeological Assessment New Pelham Elevated Tank Environmental Assessment

Part of Lots 2-4, Concession 7; Lots 2-3, Concession 8; and Lots 1-3, Concession 9 (Geographical Township of Pelham, County of Welland), Town of Pelham, Niagara Region

Original Report

Prepared for:

Niagara Region

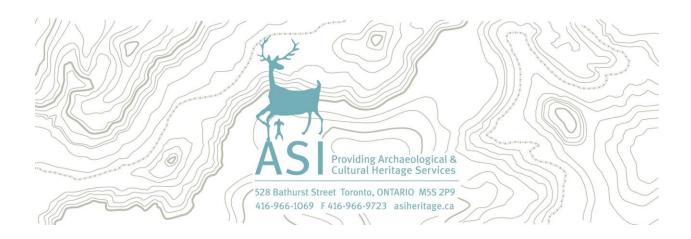
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31 October 2023



Executive Summary

Archaeological Services Inc. was contracted by the Niagara Region to conduct a combined Stage 1 and 2 Archaeological Assessment as part of the New Pelham Elevated Tank Municipal Class Environmental Assessment in the Town of Pelham. This project involves the construction of a New Elevated Storage Tank (EST) at 220 Tice Road, south of an existing golf driving range. A new feeder main alignment is proposed connecting the New EST to the existing Shoalts Drive Reservoir located at 9 Shoalts Drive, following Lookout Street, Highway 20 West, Haist Street, Bigelow Crescent, and Shoalts Drive.

Stage 1 background research determined that 33 previously registered archaeological sites are located within one kilometre of the Study Area and that it has the potential for the identification of Indigenous and Euro-Canadian archaeological. A site inspection was conducted on April 20, 2022, and confirmed that portions of the property did retain archaeological potential requiring Stage 2 property survey.

The Stage 2 property survey was conducted between June 14-17, 2022, in accordance with the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists* by test pit survey. Approximately 25 percent of the Study Area (0.2.18 hectares) was determined to have been previously assessed without further recommendations (ASI 2010: P057-647-2010) and did not require Stage 2 survey. An additional 61 percent of the Study Area (5.40 hectares) does not require Stage 2 assessment due to previous disturbance, including the existing Shoalts Drive Reservoir (9 Shoalts Drive), and the road right-of-ways of Shoalts Drive, Bigelow Crescent, Haist Street, Highway 20, and Lockout Street. The remaining 14 percent of the Study Area (1.20 hectares), comprising an overgrown former orchard and manicured golf driving range, was subject to test pit survey at five metre intervals, and judgmental test pit survey at 10 metre intervals to confirm previous disturbance. No archaeological resources were encountered during the Stage 1-2 survey, and no further archaeological assessment is recommended.



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1.0 Project Context

Archaeological Services Inc. (ASI) was contracted by the Niagara Region to conduct a combined Stage 1 and 2 Archaeological Assessment as part of the New Pelham Elevated Tank Municipal Class Environmental Assessment in the Town of Pelham. This project involves the construction of a New Elevated Storage Tank (EST) at 220 Tice Road, south of an existing golf driving range. A new feeder main alignment is proposed connecting the New EST to the existing Shoalts Drive Reservoir located at 9 Shoalts Drive, following Lookout Street, Highway 20 West, Haist Street, Bigelow Crescent, and Shoalts Drive (Figure 1).

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (*Ontario Heritage Act*, R.S.O. c. O.18, 1990, as amended in 2019) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), formerly the Ministry of Tourism and Culture (MTC, 2011).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act, RSO* (Environmental Assessment Act, R.S.O., 1990 as amended 2021) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (Municipal Class Environmental Assessment, 2000, as amended 2015).

ASI has been actively engaging with Indigenous communities who have expressed an interest in the archaeological work within the Study Area for this project on behalf of the Niagara Region. Representatives from the Mississaugas of the Credit First Nation and Six Nations of the Grand River Elected Council were present on site and participated during the Stage 2 property survey. No concerns were expressed during the execution of the fieldwork. A detailed account of all First Nations engagement can be found in the *Supplementary Documentation: Indigenous Engagement* document associated with this report.



The *Town of Pelham Heritage Master Plan August 2012 Final Report* (BRAY Heritage et al., 2012) was also consulted.

Authorization to access and carry out the activities necessary for the completion of the Stage 1-2 archaeological assessment was granted by the Niagara Region on March 29, 2022.

1.1.1 Treaties and Traditional Territories

The Study Area is within Treaty 3, the Between the Lakes Purchase. Following the 1764 Niagara Peace Treaty and the follow-up treaties with Pontiac, the English colonial government considered the Mississaugas to be their allies since they had accepted the Covenant Chain. The English administrators followed the terms of the Royal Proclamation and insured that no settlements were made in the hunting grounds that had been reserved for their use (Johnston, 1964; Lytwyn, 2005). In 1784, under the terms of the "Between the Lakes Purchase" signed by Sir Frederick Haldimand and the Mississaugas, the Crown acquired over one million acres of land in-part spanning westward from near modern day Niagara-on-the-Lake along the south shore of Lake Ontario to modern day Burlington (Aboriginal Affairs and Northern Development Canada, 2016).

1.2 Historical Context

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris, 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling



trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 BP and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 BP, evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 BP there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 BP - it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident in detailed Anishinaabek ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 BP, lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (CE), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson, 1990, p. 317). By 1300-1450 CE, this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities



(Birch et al., 2021). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

By 1600 CE, the Huron-Wendat communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the Haudenosaunee and the Huron-Wendat were at peace and remained "la nation neutre". Like the Huron-Wendat, Petun, and Haudenosaunee, the Neutral or Attawandaron people were settled village agriculturalists. In the 1640s, the Attawandaron and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) were decimated by epidemics and ultimately dispersed by the Haudenosaunee. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

1.2.2 Post-Contact Settlement

Historically, the Study Area is located in the Geographical Township of Pelham, County of Welland in the following lots and concessions:

- Lots 2-4, Concession 7;
- Lots 2-4, Concession 8; and
- Lots 1-3, Concession 9

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.



For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 metres of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006).

Pelham Township

The first township survey was not undertaken until 1794, and the first legal settlers occupied their land holdings in the same year. The township was named after the Henry Fiennes Pelham Clinton (1720-1794), ninth Earl of Lincoln and second Duke of Newcastle-under-Lyme. Pelham was initially settled by disbanded soldiers, mainly Butler's Rangers, following the end of the American Revolutionary War. The township was struck by a destructive tornado in July 1792, which cut a path through the woods which was utilized by the early settlers as a road. It is still in existence today and was appropriately named "Hurricane Road." During the early nineteenth century, many members of the Society of Friends or Quakers settled in Pelham. (Armstrong, 1985, p. 146; p. 86; Smith, 1846, p. 143; Rayburn, 1997, p. 267; Pelham Women's Institute, 1951).

Fonthill

Fonthill was a post office village located along Highway 20, near the boundary of the former Pelham and Thorold townships in Welland County. When first settled in 1842, it was originally named "Osborne's Corners" after an early settler. The



post office was moved here from Riceville in 1856. During the 1840s, this village was renamed "Temperanceville," but became known as "Fonthill," possibly named after Fonthill Abbey in Wiltshire, England, in 1856. Registered plans of a subdivision for this village date from 1852. It contained several stores, a post office, hotel, harness maker, shoe shop, blacksmith, carriage factory, bakery, tailors, insurance agencies, two churches, the Fonthill nursery, factories, mills, telegraph office, concert hall, cigar factory, furniture factory, newspaper office, cemetery, various lodges and societies, and a school. Fonthill was once the location of the Welland County Land Registry office. One of the chief benefactors to the village was Dexter D'Everardo, who was schoolteacher and Land Registrar (Burtniak, 1972, pp. 295–301; Crossby, 1873, p. 117; Fonthill Women's Institute, 1967; Rayburn, 1997, p. 122; Scott, 1997, p. 82; Winearls, 1991, p. 670).

In 1922, Fonthill became a separate municipality, joining the tri-hamlets of Pelham Corners and Ridgeville, and in 1970 Fonthill amalgamated with nearby historical communities Ridgeville, Effingham, Fenwick, and North Pelham to form the Town of Pelham (Town of Pelham, 2013).

1.2.3 Map Review

The 1862 Tremaine's Map of Welland County (Tremaine & Tremaine, 1862), 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland (Page, 1876), 1906 topographic map Niagara sheet (Department of Militia and Defence, 1906), and 1996 National Topographic Series Niagara sheet (Department of Natural Resources, 1996) were examined to determine the presence of historic features within the Study Area during the nineteenth and twentieth centuries (Figure 2Figure 5).

The 1862 map (Figure 2) shows that Highway 20 West, Canboro Road, Haist Street, and Pancake Lane were historically surveyed roads. The village of Fonthill is shown east of the Study Area. The 1876 map (Figure 3) depicts seven structures and three orchards adjacent the Study Area. The 1906 map (Figure 4) shows Lookout Street has been constructed. Haist Street has a telegraph or telephone line along it. By 1996 (Figure 5), Fonthill has expanded to west of the intersection of Haist Street and Highway 20 West. Bigelow Crescent, Shoalts Drive, and Shoalts Drive Reservoir have been constructed. Highway 20 West, Haist Street, Bigelow



Crescent, and Shoalts Drive are bounded by residential development. Some structures are shown along Lookout Street and Highway 20 West. A communications tower is west of Lookout Street.

1.2.4 Aerial and Orthoimagery Review

Aerial photography from 1954 (Hunting Survey Corporation Limited, 1954) shows residential development surrounding the Highway 20 West and Haist Street intersection, with the remainder of the Study Area bound by open fields and few structures (Figure 6).

A review of available Google satellite imagery since 2007 shows:

- 2007-2017 (Image 1-Image 7): Residential development east of Lookout Street from north of Marlene Drive to Highway 20 West;
- 2010-2017 (Image 8-Image 10): Commercial development at 160-164
 Highway 20 West; and
- 2010-2015 (Image 11-Image 12): Widening of the righthand turn lane in the northeast corner of the Highway 20 West and Haist Street intersection.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MHSTCI through *Ontario's Past Portal*; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

The Study Area includes the area for the new elevated tank at 220 Tice Road, the existing Shoalts Drive Reservoir at 9 Shoalts Drive, and parts of the Lookout



Street, Highway 20 West, Haist Street, Bigelow Crescent, and Shoals Drive rightof-ways connecting the two locations. The area at 220 Tice Road includes the south end of a golf course driving range, and an overgrown former orchard. Lookout Street is a two-lane roadway with curbs and a sidewalk on the east side. Lookout Street is bound by residences, an agricultural field, a stormwater management pond, and the Community of Lookout Ridge retirement home. Between Haist Street and west of Lookout Street, Highway 20 West has two lanes with a middle lane for turning, it has curbs and sidewalks on both sides, and is bound by commercial properties. East of Haist Street, Highway 20 West has a lane for westbound traffic, one for eastbound traffic, and lefthand and righthand turning lanes. It has curbs and sidewalks on both sides and bound by residential development. Haist Street is a two-lane roadway with curbs and sidewalks on both sides. Bigelow Crescent and Shoalts Drive are two-lane roadways which lack curbs and are bound by residential development. Shoals Drive has a sidewalk on its east side. The Shoalts Drive Reservoir, located at 9 Shoalts Drive, is a large underground storage tank.

The Stage 1 property inspection was conducted on April 20, 2022, under the field direction of Douglas Todd (R055), and the Stage 2 property survey was conducted from June 14-17. 2022, under the field direction of Jacob Roberts (R1291).

1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Study Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.



Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow & Warner, 1990: Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include elevated topography (eskers, drumlins, large knolls, and plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

The Study Area is located within the kame moraines of the Haldimand Clay Plain (Figure 7) physiographic region of southern Ontario (Chapman & Putnam, 1984). The Haldimand Clay Plain physiographic region (Chapman and Putnam 1984:156-159) is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500 square kilometres (MacDonald 1980:3). Generally, this region is flat and poorly drained, although it includes several distinctive landforms including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins. Within this part of the Niagara peninsula, a number of environmental sub-regions have been described, including the Niagara Slough Clay Plain, the Fort Erie Clay Plain, the Calcareous Rock Plain (Onondaga Escarpment), the Buried Moraines, the Lake Erie Coast, and the Niagara River Valley (MacDonald, 1980). The distribution and nature of these sub-regions, and the specific environmental features they contain, have influenced land use in the region throughout history and pre-history.

Figure 8 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by coarse-textured glaciolacustrine



deposits of sand, gravel, minor silt and clay, and by littoral deposits (Ontario Geological Survey, 2010). A shore bluff or scarp cuts through the Study Area at Lookout Street.

Soil within the Study Area (Figure 9) includes Fonthill with rapid drainage. The remainder is not mapped and includes residential, industrial, and recreational land areas.

The Study Area is in the Coyle Creek subwatershed of the Central Welland River watershed. The Central Welland River watershed covers parts of the Township of West Lincoln, Township of Wainfleet, Town of Pelham, City of Welland, and the City of Port Colborne. The watershed is characterized mainly by agricultural use, with major concentrations of urban land uses such as residential, commercial and industrial uses, in the City of Port Colborne and the City of Welland, with smaller residential areas in Fonthill and Fenwick. The watershed has upland forests at 15 percent, wetlands at 10 percent, and riparian habitats at 43 percent (Niagara Peninsula Conservation Authority, 2010, 2012).

1.3.3 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MHSTCI. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 kilometres east to west, and approximately 18.5 kilometres 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 under review is located in Borden block *AgGt*.

According to the Ontario Archaeological Sites Database, 33 previously registered archaeological sites are located within one kilometre of the Study Area, none of which are located within 50 metres (MHTSCI 2022)(Ministry of Heritage, Sport, Tourism and Culture Industries, 2022). A summary of the sites is provided below.



1.3.4 Previous Archaeological Assessments

According to the background research, four previous reports detail fieldwork within 50 metres of the Study Area.

Reports within the Study Area

(ASI 1997) Stage 1 Archaeological Assessment of Mori Property, Town of Pelham Niagara Region, Ontario. Licence #97-019. ASI file 97ZO-01.

ASI conducted a Stage 1 archaeological assessment of the Mori Nurseries Property in 1997. The project area overlaps parts of the current Study Area east of Lookout Street. Background research determined that Stage 2 archaeological assessment be conducted.

(AMICK Consultants Ltd., 2001) Report on the 2001 Stage 1-2 Archaeological Assessment of the Proposed Lookout Point Golf & Country Club Practice Facility, Part of Lot 4, Concession 7, (former geographic Township of Pelham, Welland County) now in the Town of Pelham, Niagara Region. Licence 2001-012-003.

AMICK Consultants Ltd. Conducted a Stage 1-2 assessment as part of the Point Golf and Country Club Practice Facility in 2001. The project area overlaps parts of the current Study Area at 220 Tice Road. The properties at 1584, 1578, and 1568 were subject to test pit survey at five metre intervals. The test pits were largely disturbed, and twentieth century material such as glass, roof asphalt, wire nails, and gravel were recovered. No recommendations were made for the areas of the subject property subject to test pit survey.



Table 1: Registered Sites within One Kilometre of the Study Area

Borden Number	Site Name	Temporal/ Cultural Affiliation	Site Type	Researcher
AgGt-9	Lanthrop	Late Archaic	Campsite	Fox 1980; ASI 2004
AgGt-11	Not Applicable	Precontact Indigenous	Campsite	Pihl 1981
AgGt-12	Not Applicable	Precontact Indigenous	Findspot	Pihl 1981
AgGt-13	Not Applicable	Precontact Indigenous	Findspot	Pihl 1981
AgGt-14	Not Applicable	Precontact Indigenous	Findspot	Pihl 1981
AgGt-15	Not Applicable	Precontact Indigenous	Campsite	Pihl 1981
AgGt-17	Steed and Evans 1	Middle Woodland	Findspot	Foster 1982
AgGt-18	Steed and Evans 2	Middle Archaic	Campsite	Foster 1982
AgGt-19	Steed and Evans 3	Middle Archaic;	Midden; homestead	Foster 1982
		Euro-Canadian		

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Borden Number	Site Name	Temporal/ Cultural Affiliation	Site Type	Researcher
AgGt-20	Steed and Evans 4	Archaic	Campsite	Foster 1982
AgGt-21	Steed and Evans 5	Middle Archaic	Campsite	Foster 1982
AgGt-22	Steed and Evans 6	Middle Archaic; Euro-Canadian	Homestead	Foster 1982
AgGt-23	Steed and Evans 7	Precontact Indigenous	Findspot	Foster 1982
AgGt-25	Steed and Evans 9	Euro-Canadian	Scatter	Foster 1982
AgGt-44	Milburn	Late Archaic	Campsite	ASI 1986
AgGt-51	Kunda Park Extension 2	Precontact Indigenous	Scatter	Michael 1987
AgGt-52	Not Applicable	Precontact Indigenous	Campsite	Mayer, Pihl, Poulton & Associates Inc. 1988
AgGt-53	Rolling Meadows 2	Precontact Indigenous	Campsite	Mayer, Pihl, Poulton & Associates Inc. 1988

Borden Number	Site Name	Temporal/ Cultural Affiliation	Site Type	Researcher
AgGt-55	Not Applicable	Precontact Indigenous	Findspot	Mayer, Pihl, Poulton & Associates Inc. 1988
AgGt-56	Not Applicable	Middle Archaic	Scatter	Mayer, Pihl, Poulton & Associates Inc. 1988
AgGt-57	Not Applicable	Precontact Indigenous	Findspot	Mayer, Pihl, Poulton & Associates Inc. 1988
AgGt-91	Cherry Hill	Early Archaic; Late Archaic	Campsite	Mayer, Pihl, Poulton & Associates Inc. 1997
AgGt-106	Cora	Precontact Indigenous	Campsite	Mayer, Pihl, Poulton & Associates Inc. 2006
AgGt-143	Not Applicable	Precontact Indigenous	Campsite	Grimes 2006
AgGt-144	Not Applicable	Middle Archaic	Campsite	Grimes 2006
AgGt-145	Not Applicable	Precontact Indigenous	Campsite	Grimes 2006

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Borden Number	Site Name	Temporal/ Cultural Affiliation	Site Type	Researcher
AgGt-168	Not Applicable	Euro-Canadian	Homestead	Archaeologix 2008
AgGt-169	Not Applicable	Precontact Indigenous; Euro-Canadian	Scatter	Archaeologix 2008
AgGt-170	Not Applicable	Late Archaic	Findspot	Archaeologix 2008
AgGt-171	Not Applicable	Middle Archaic	Campsite	Archaeologix 2008
AgGt-270	Not Applicable	Euro-Canadian	Residential	Detritus Consulting 2019
AgGt-279	Kepeyapanoqua	Precontact Indigenous	Campsite	Earthworks Archaeological Services Inc. 2020
AgGt-290	Location 3	Precontact Indigenous	Campsite	Stantec 2020 2021

The remainder of the subject property consisted of agricultural field, and of a fruit tree orchard west of Lookout Street that was able to be ploughed in wide strips. Pedestrian survey was conducted at five metre intervals. Three isolated findspots were encountered within the ploughed portion of the property and outside the current study area. Surrounding each findspot, transects were intensified to one metre intervals for a 20-metre radius. Findspots 1 and 3 were each a piece of chipping detritus, and Findspot 2 was a large, utilized flake. The ploughed areas were cleared of further archaeological concern. However, given the nature of strip-ploughing during AMICK's assessment and that the assessment was completed prior to the implementation of the 2011 S & G's, the former orchard was subject to test pit survey during the current assessment of the Study Area.

(ASI 2010) Stage 1 Archaeological Assessment (Background Research and Property Inspection) Regional Road 20 between Haist Street and Lookout Street, Town of Pelham, Niagara Region, Ontario. P057-647-2010. ASI file 10EA-134.

ASI conducted a Stage 1 archaeological assessment as part of the Regional Road 20 Class Environmental Assessment in 2010. The project area overlaps parts of the current Study Area along Highway 20 West, Haist Street, and Lookout Street. The road right-of-ways were determined to be disturbed and not recommended for further assessment. The grassed areas beyond the right-of-ways at 160 and 170 Highway 20 West were recommended for Stage 2 archaeological assessment.

Additional Reports within 50 metres of the Study Area

(Detritus Consulting Ltd., 2017) Stage 1-2 Archaeological Assessment 1611 and 1613 Lookout Street Lot 3, Concession 7, Geographic Township of Pelham, now Town of Pelham, Historic County of Welland Niagara Region, Ontario. P389-0296-2017.

Detritus Consulting Ltd. conducted a Stage 1-2 archaeological assessment on the residential properties of 1611 and 1613 Lookout Street in Fonthill. The project area is adjacent to the Study Area at 1611 Lookout Street. Test pit survey was conducted at five metre intervals. It did not result in the identification of archaeological resources, and no further archaeological assessment of the project area was recommended.



1.3.5 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Study Area meets the following criteria indicative of archaeological potential:

- Previously identified archaeological sites (See Table 1);
- Early historic transportation routes (Highway 20 West, Canboro Road, Haist Street, Pancake Lane); and
- Proximity to early settlements (Fonthill); and

According to the S & G, Section 1.4 Standard 1.e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The Municipal Heritage Register was consulted and no properties within the Study Area are Listed or Designated under the *Ontario Heritage Act*.

The *Town of Pelham Heritage Master Plan August 2012 Final Report* (BRAY Heritage et al., 2012) was reviewed for background information and to help inform any indicators of archaeological potential not captured in other research. ASI's review of the archaeological management plan indicates that most of the Study Area exhibits archaeological potential (Figure 10). Generally speaking, archaeological management plans are high-level analyses of archaeological potential for non-specialist but cannot not be considered a replacement for Stage 1 archaeological assessments.

These criteria are indicative of potential for the identification of archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.

2.0 Field Methods

The Stage 1-2 Study Area comprises the lands for the new elevated tank at 220 Tice Road, the existing Shoalts Drive Reservoir at 9 Shoalts Drive, and parts of the Lookout Street, Highway 20 West, Haist Street, Bigelow Crescent, and Shoals



Drive right-of-ways connecting the two locations (Figure 1). It covers an area of 8.78 hectares (Figure 11Figure 15).

A Stage 1 property inspection was conducted by Douglas Todd (R055) on April 20, 2022, in accordance with the *Ontario Heritage Act* and the S & G, Section 1.2 and 1.3. The site inspection confirmed that a portion of the property retains archaeological potential and requires a Stage 2 property survey, while the majority of the Study Area has been subjected to previous disturbances.

The Stage 2 property survey was conducted under the field direction of Jacob Roberts (R1291) between June 14-17, 2022, in accordance with the *Ontario Heritage Act* and the S & G, Section 2. During the field assessments, weather and lighting conditions permitted good visibility and were in accordance with the S & G, Section 2.1, Standard 3. During the time of survey, conditions were seasonal with overcast to sunny skies and temperatures of 25-30 degrees Celsius. Photographs of all field conditions were taken (Image 13Image 40), and the location and direction of each photograph is mapped in Figure 15.

As per Section 2.1 of the S & G, all necessary lands were subject to test pit survey. Ploughing was not a viable option on the golf course lands nor in the former orchard due to the overgrown conditions. According to Section 2.1.2, Standard 2 of the S & G, any undisturbed areas requiring test pit survey within 300 metres of any feature of archaeological potential must be subject to systematic assessment at five metre intervals. Test pits were placed at five metre intervals until disturbance was encountered, and then judgmentally increased to 10 metres intervals as per S & G Section 2.1.8. All test pits were excavated following the S & G Section 2.1.2, Standards 2-9. All test pits were excavated by hand to a minimum of 30 centimetres in diameter and into the first five centimetres of subsoil. Each test pit was and examined for stratigraphy, cultural features, and evidence of fill. Test pit fill was screened through six-millimetre mesh to facilitate artifact recovery. Afterwards, all test pits were backfilled, and their locations were recorded on field maps. Any factors that precluded the excavation of test pits (e.g., excessive slope, drainage, exposed bedrock, previous disturbance) were noted, and the areas were mapped and photographed.



Fieldwork was conducted using a Samsung Galaxy S4 tablet running Esri Collector software equipped with a sub-metre Trimble Catalyst Global Navigation Satellite System in conjunction with project mapping provided by Niagara Region to ensure the assessment remained within the Study Area limits.

2.1 Areas of No Archaeological Potential

Approximately 25 percent of the Study Area (2.18 hectares) was previously assessed and not subject to Stage 2 assessment as per S & G Section 2.1, Standard 2.c (ASI 2010: P057-647-2010).

Visual assessment determined that a significant portion of the Study Area did not retain archaeological potential. Approximately 61 percent of the Study Area (5.40 hectares) had been previously subject to deep and extensive ground disturbance and was not subject to Stage 2 survey, as per S & G Section 2.1, Standard 2.b. The lands documented as being previously disturbed include those of the existing Shoalts Drive Reservoir (9 Shoalts Drive), and the road right-of-ways of Shoalts Drive, Bigelow Crescent, Haist Street, Highway 20, and Lockout Street (Figure 12-Figure 15; Image 13-Image 32).

2.2 Test Pit Survey

Approximately 13 percent of the Study Area (1.11 hectares) was found to contain natural topsoil (A-horizon) and was subject to test pit survey at five metre intervals following S & G Section 2.1.2, Standards 1-9. The areas subject to test pit survey at five metre intervals include an overgrown former orchard and the manicured portion of a driving range located at 220 Tice Road (Figure 12; Image 33-Image 37).

Undisturbed stratigraphy in the Study Area is characterized by approximately 16-20 centimetres of very dark grayish brown (10YR 3/2) sandy loam topsoil (Ahorizon) overlying a brown (7.5YR 4/3) sandy clay subsoil (Bhorizon) (Image 38).

Approximately one percent of the Study Area (0.09 hectares) did not contain natural topsoil (A-horizon) and was subject to judgmental test pit survey at 10 metre intervals to confirm previous disturbance following S & G Section 2.1.8,



Standards 1-2. The areas subject to judgmental test pit survey include a manicured portion of the driving range located at 220 Tice Road (Figure 12; Image 39).

Disturbed stratigraphy in the Study Area is characterized by 3-14 centimetres of graded and redeposited brown (10YR 4/3) silty loam topsoil, followed by 7-10 centimetres of greenish gray (10GY 5/1) sandy loam fill, atop at least 80 centimetres of greenish gray (10GY 5/1) sandy loam fill mottled with redeposited brown (10YR 4/2) silty loam topsoil (Image 40).

2.3 Stage 1-2 Assessment Results Summary

A summary of the Stage 1-2 assessment results for the New Pelham Elevated Tank Environmental Assessment can be found in Table 2 below.

Table 2: Stage 1-2 Survey Results Summary

Survey Method	Area	Description	Images
Not assessed due to previous assessment; no archaeological potential	2.18 hectares (25 percent)	ASI 2010 (P057-647- 2010)	Not applicable
Visually assessed as being previously disturbed; no archaeological potential	5.40 hectares (61 percent)	Shoalts Drive Reservoir, and the road right-of-ways of Shoalts Drive, Bigelow Crescent, Haist Street, Highway 20, and Lockout Street	13-32
Test pit survey; five metre intervals	1.11 hectares (13 percent)	Overgrown former orchard, manicured lawn of a driving range	33-38



Survey Method	Area	Description	Images
Judgmental test pit survey; 10 metre intervals	0.09 hectares (one percent)		39-40

3.0 Record of Finds

No archaeological resources were encountered during the course of the Stage 1-2 Archaeological Assessment for the New Pelham Elevated Tank Environmental Assessment.

3.1 Inventory of Documentary and Material Record

The documentation related to this archaeological assessment will be curated by ASI until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the MHSTCI, and any other legitimate interest groups.

Table 3 provides an inventory and location of the documentary and material record for the project in accordance with the S & G, Sections 6.7 and 7.8.2.3.

Table 3: Inventory of Documentary and Material Record

Material	Location	Comments
Digital field notes, field maps, GPS logs, etc.	Archaeological Services Inc., 528 Bathurst Street, Toronto, Ontario, M5S 2P9	Stored in ASI project folder 22EA-042; GPS and digital information stored on ASI network servers
Digital field photography	Same as above	Files stored on ASI network servers



Material	Location	Comments
Digital research, analysis, and reporting materials	Same as above	Files stored on ASI network servers

4.0 Analysis and Conclusions

ASI was contracted by the Niagara Region to conduct a combined Stage 1 and 2 Archaeological Assessment as part of the New Pelham Elevated Tank Environmental Assessment in the Town of Pelham. This project involves the construction of a New EST at 220 Tice Road, south of an existing golf driving range. A new feeder main alignment is proposed connecting the New EST to the existing Shoalts Drive Reservoir located at 9 Shoalts Drive, following Lookout Street, Highway 20 West, Haist Street, Bigelow Crescent, and Shoalts Drive (Figure 1).

Stage 1 background research determined that 33 previously registered archaeological sites are located within one kilometre of the Study Area. A review of the historical and archaeological contexts of the Study Area also suggested that it had the potential for the identification of Indigenous and Euro-Canadian archaeological resources depending on the degree to which soils have been impacted. A site inspection was conducted on April 20, 2022, and confirmed that portions of the property retained archaeological potential and would require Stage 2 test pit survey.

The Stage 2 property survey was conducted between June 14-17, 2022, in accordance with the *Ontario Heritage Act* and the S & G by test pit survey. Approximately 25 percent of the Study Area (0.2.18 hectares) was determined to have been previously assessed without further recommendations (ASI 2010: P057-647-2010) and did not require Stage 2 survey (Figure 12-Figure 14). An additional 61 percent of the Study Area (5.40 hectares) was determined to not require Stage 2 assessment due to previous disturbance and includes the existing Shoalts Drive Reservoir (9 Shoalts Drive), and the road right-of-ways of Shoalts



Drive, Bigelow Crescent, Haist Street, Highway 20, and Lockout Street (Figure 12-Figure 15; Image 13-Image 32). The remaining 14 percent of the Study Area (1.20 hectares), comprising an overgrown former orchard and manicured golf driving range, was subject to test pit survey at five metre intervals, and judgmental test pit survey at 10 metre intervals to confirm previous disturbance (Figure 12; Image 33-Image 40). No archaeological resources were encountered during the Stage 1-2 survey, and no further archaeological assessment is recommended.

5.0 Recommendations

In light of these results, the following recommendations are made:

- The Study Area does not require further archaeological assessment; and
- Should the proposed work extend beyond the current Study Area, or should changes to the project design or temporary workspace requirements result in the inclusion of previously un-surveyed lands, these lands should be subject to a Stage 2 archaeological assessment.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. If archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Archaeology Programs Unit of the MHSTCI should be immediately notified.

The above recommendations are subject to Ministry approval, and it is an offence to alter any archaeological site without MHSTCI concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of MHSTCI approval has been received.



6.0 Legislation Compliance Advice

ASI advises compliance with the following legislation:

- This report is submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 2005, 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 field work and report recommendations ensure the conservation, preservation, and protection 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 regards 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 field work 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 sec. 48 (1) of the Ontario Heritage Act.
- The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the



Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

• Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, nor may artifacts be removed from them, except by a person holding an archaeological license.



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8.0 Images

8.1 Historical Imagery



Image 1: Lookout Street at Marlene Stewart Drive in 2007





Image 2: Residential development east of Lookout Street at Marlene Stewart Drive in 2010





Image 3: Residential development east of Lookout Street at Marlene Stewart Drive in 2015





Image 4: Lookout Street at Highway 20 West in 2007





Image 5: Residential development east of Lookout Street at Highway 20 West in 2015





Image 6: Residential development east of Lookout Street at Highway 20 West in 2016



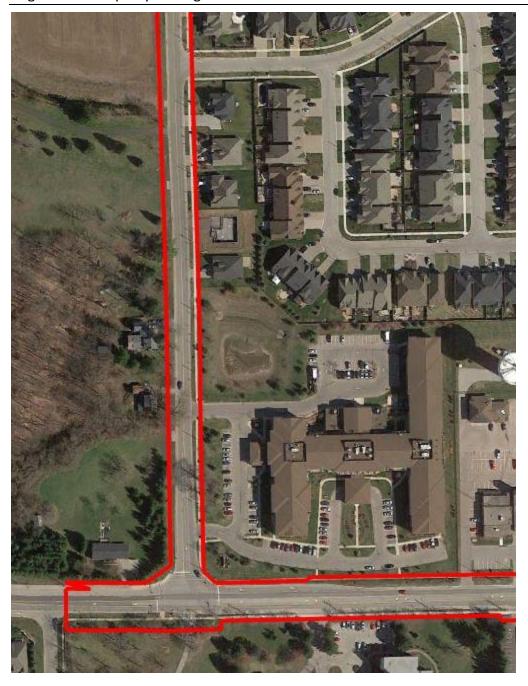


Image 7: Residential development east of Lookout Street at Highway 20 West in 2017



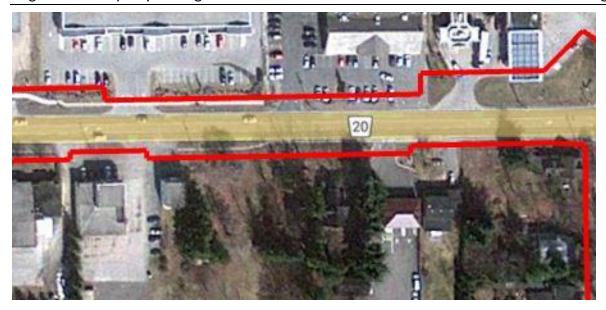


Image 8: Conditions of 160-164 Highway 20 West in 2010

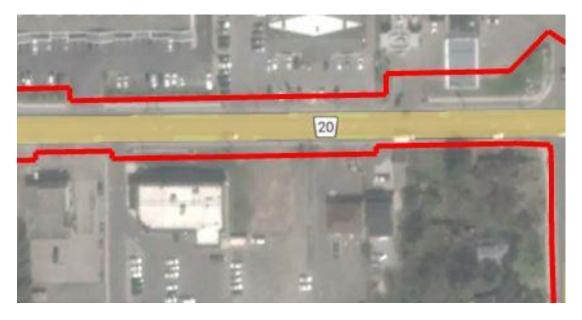


Image 9: New building at 164 Highway 20 West in 2015





Image 10: New building at 160 Highway 20 West in 2017



Image 11: Conditions of the Highway 20 West and Haist Street intersection in 2010





Image 12: Widened northeast corner of the Highway 20 West and Haist Street intersection for righthand turn lane in 2015



8.2 Field Photography



Image 13: Shoalts Drive Reservoir; previously disturbed, no potential.



Image 14: Shoalts Drive Reservoir; previously disturbed, no potential.





Image 15: Shoalts Drive Reservoir; previously disturbed, no potential.



Image 16: Shoalts Drive right-of-way and Shoalts Drive Reservoir; previously disturbed, no potential.





Image 17: Shoalts Drive; previously disturbed right-of-way, no potential.



Image 18: Bigelow Crescent; previously disturbed right-of-way, no potential.





Image 19: Bigelow Crescent; previously disturbed right-of-way, no potential.



Image 20: Bigelow Crescent; previously disturbed right-of-way, no potential.





Image 21: Bigelow Crescent; previously disturbed right-of-way, no potential.



Image 22: Haist Street; previously disturbed right-of-way, no potential.





Image 23: Haist Street; previously disturbed right-of-way, no potential.



Image 24: Haist Street; previously disturbed right-of-way, no potential.





Image 25: Haist Street; previously disturbed right-of-way, no potential.



Image 26: Haist Street; previously disturbed right-of-way, no potential.





Image 27: Haist Street; previously disturbed right-of-way, no potential.



Image 28: Haist Street; previously disturbed right-of-way, no potential.



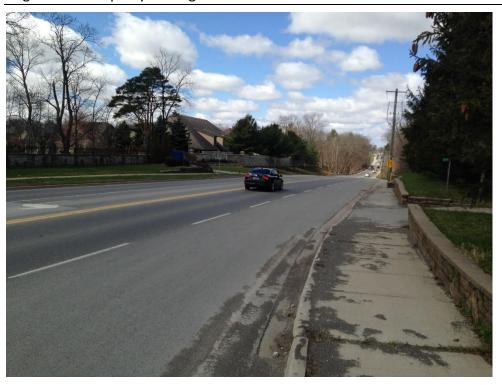


Image 29: Highway 20 West; previously disturbed right-of-way, no potential.



Image 30: Lookout Street; previously disturbed right-of-way, no potential.





Image 31: Lookout Street; previously disturbed right-of-way, no potential.



Image 32: Lookout Street; previously disturbed right-of-way, no potential.





Image 33: Test pit survey at five metre intervals in progress within existing golf driving range lands.



Image 34: Test pit survey at five metre intervals in progress.





Image 35: Test pit survey at five metre intervals in progress.



Image 36: Test pit survey at five metre intervals in progress.





Image 37: Test pit survey at five metre intervals in progress within existing golf driving range lands.



Image 38: Test pit profile demonstrating natural topsoil (A-horizon) over subsoil (B-horizon).





Image 39: Judgmental test pit survey at 10 metre intervals in progress.



Image 40: Test pit profile demonstrating graded and redeposited topsoil overlying subsoil.



9.0 Maps



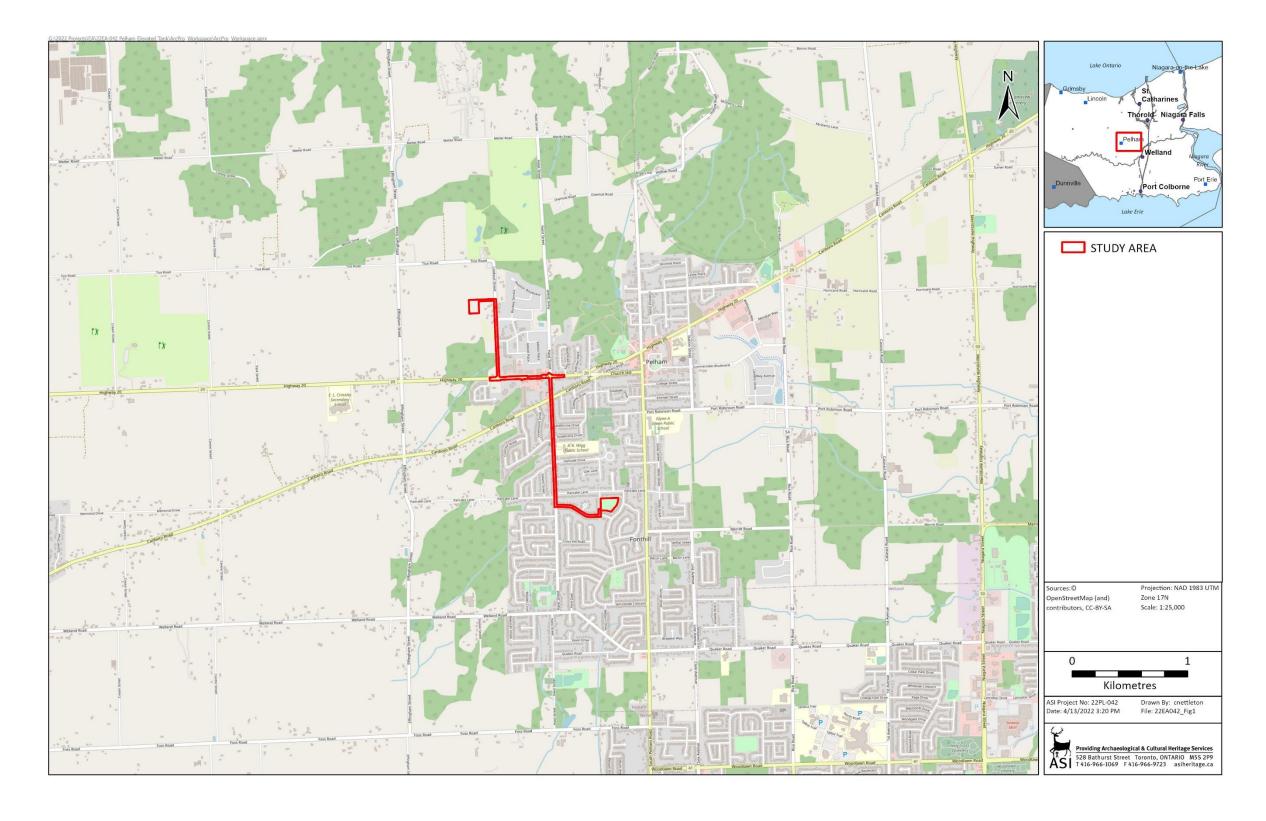


Figure 1: New Pelham Elevated Tank Study Area



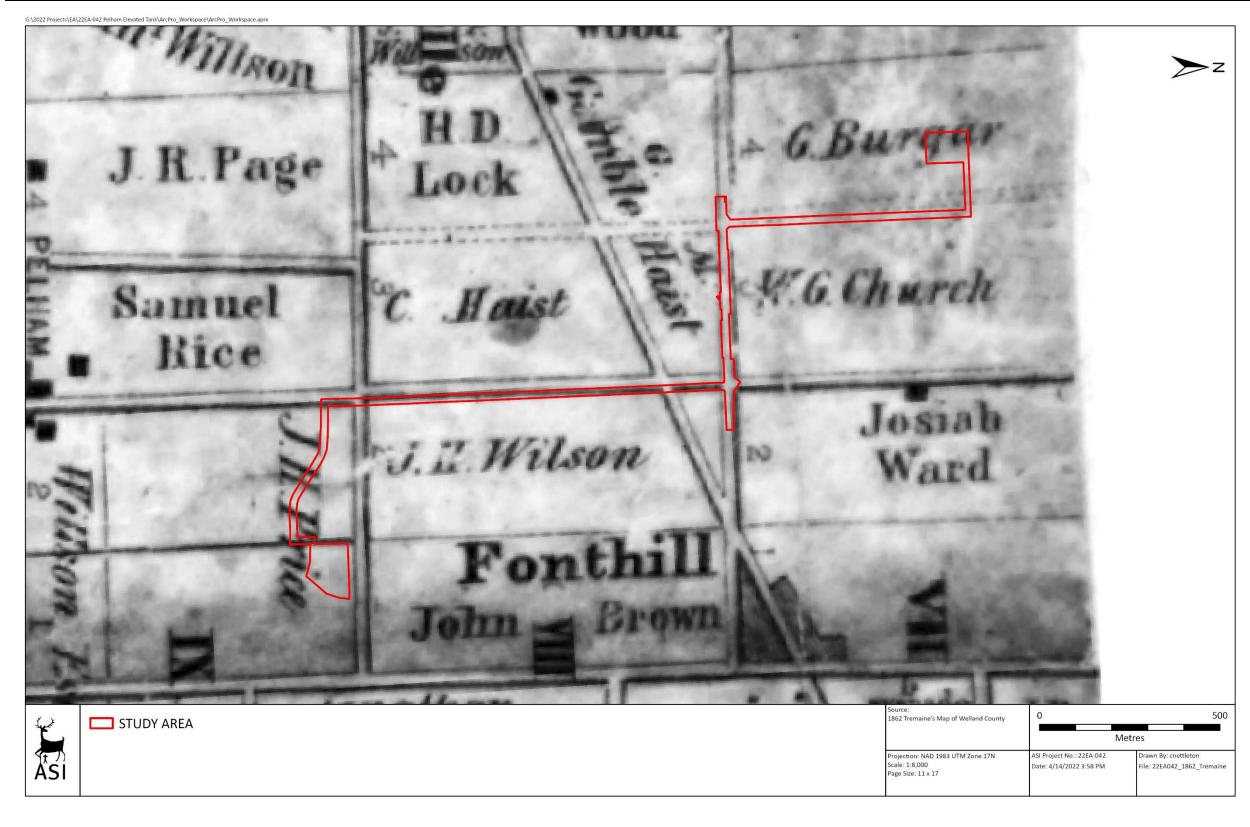


Figure 2: Study Area (Approximate Location) Overlaid on the Tremaine's Map of Welland County



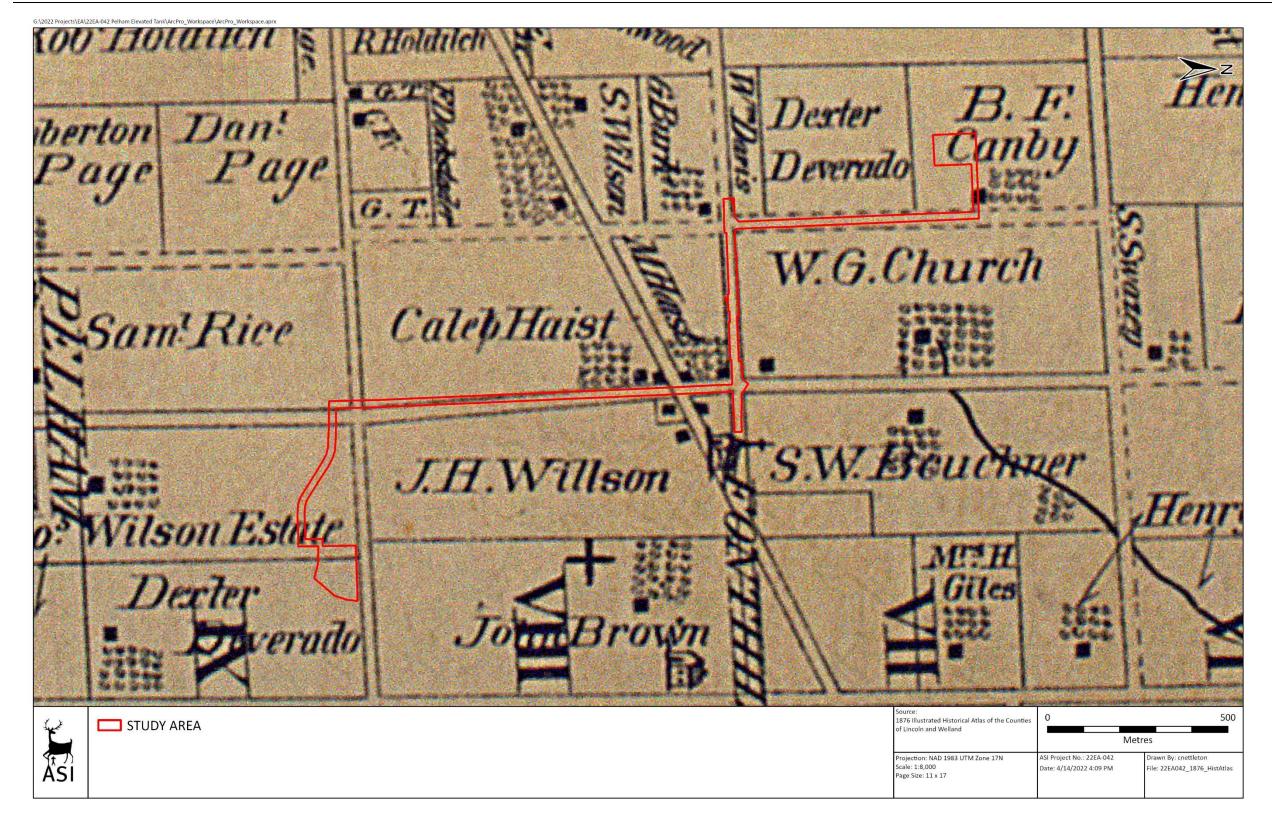


Figure 3: Study Area (Approximate Location) Overlaid on the 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland



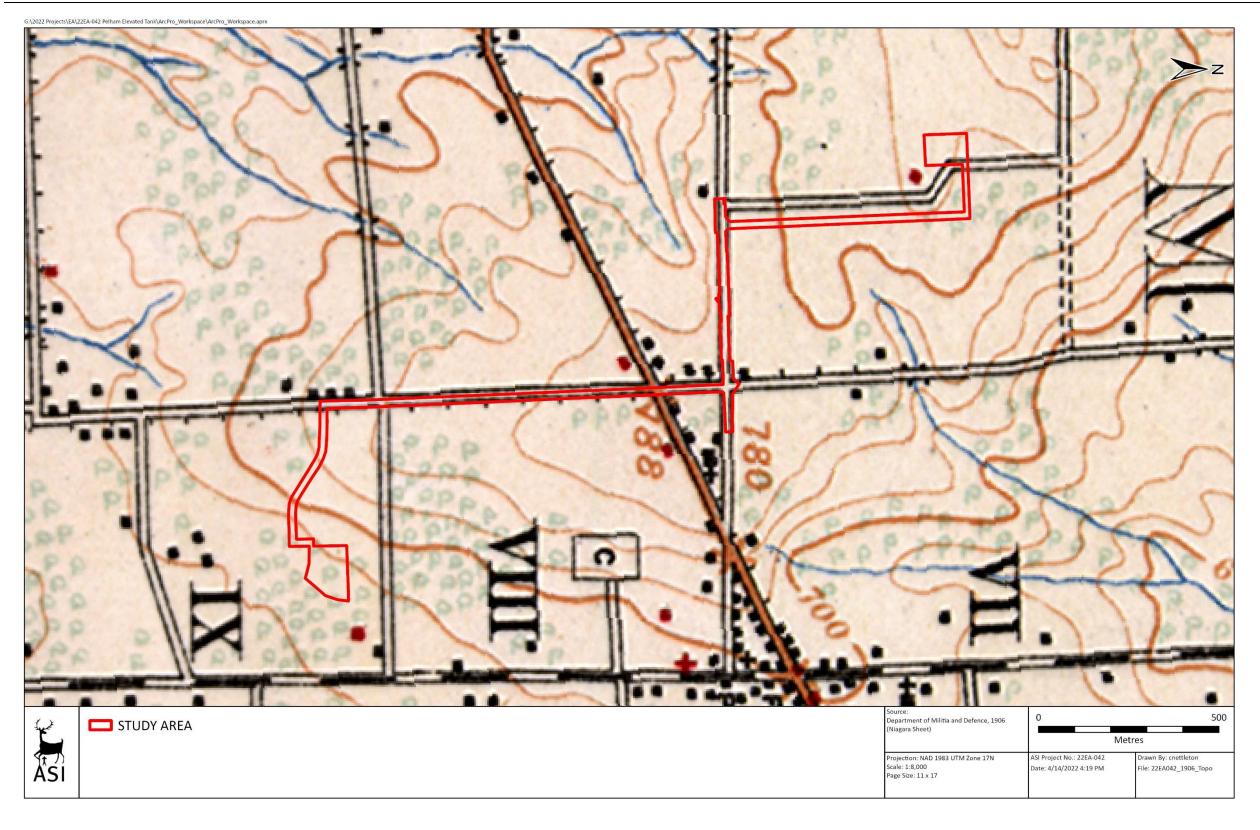


Figure 4: Study Area (Approximate Location) Overlaid on the 1906 Topographic Map Niagara Sheet



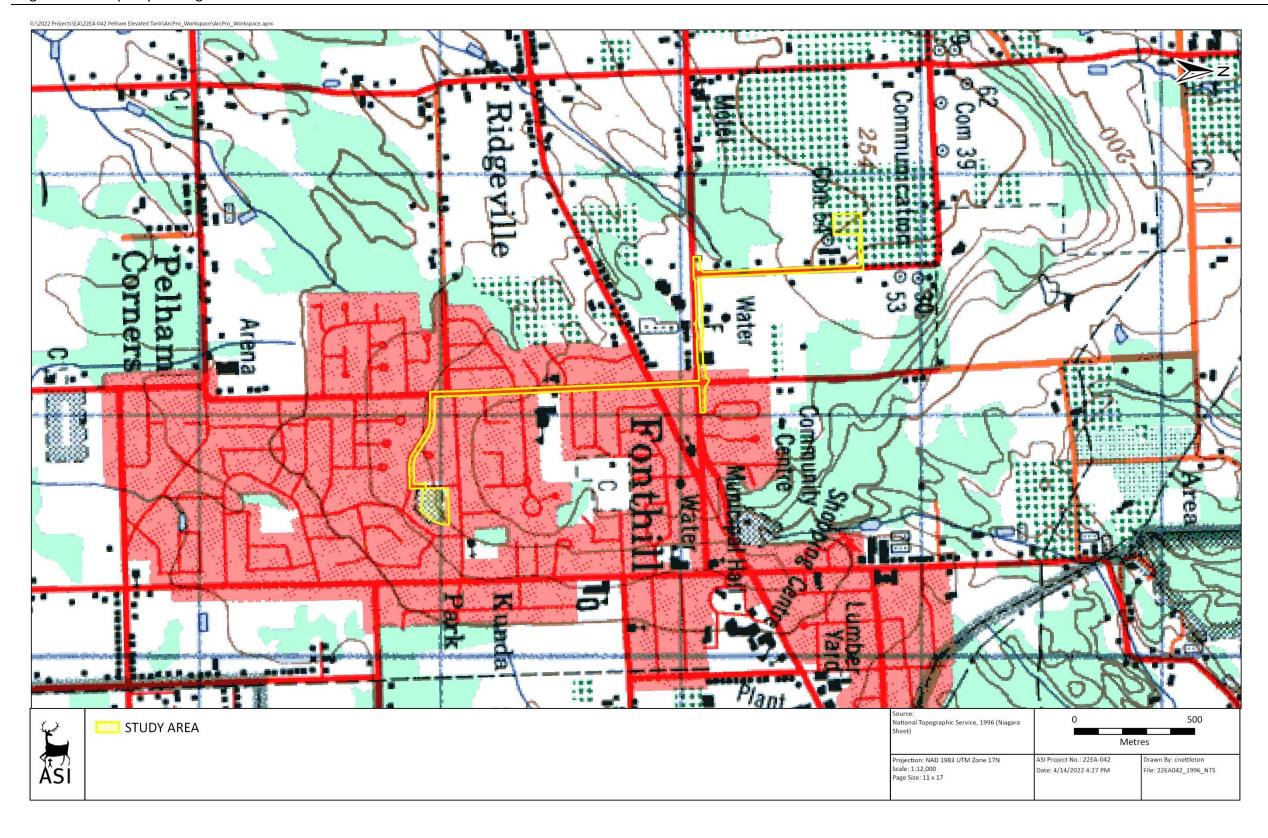


Figure 5: Study Area (Approximate Location) Overlaid on the 1996 National Topographic Series Niagara Sheet



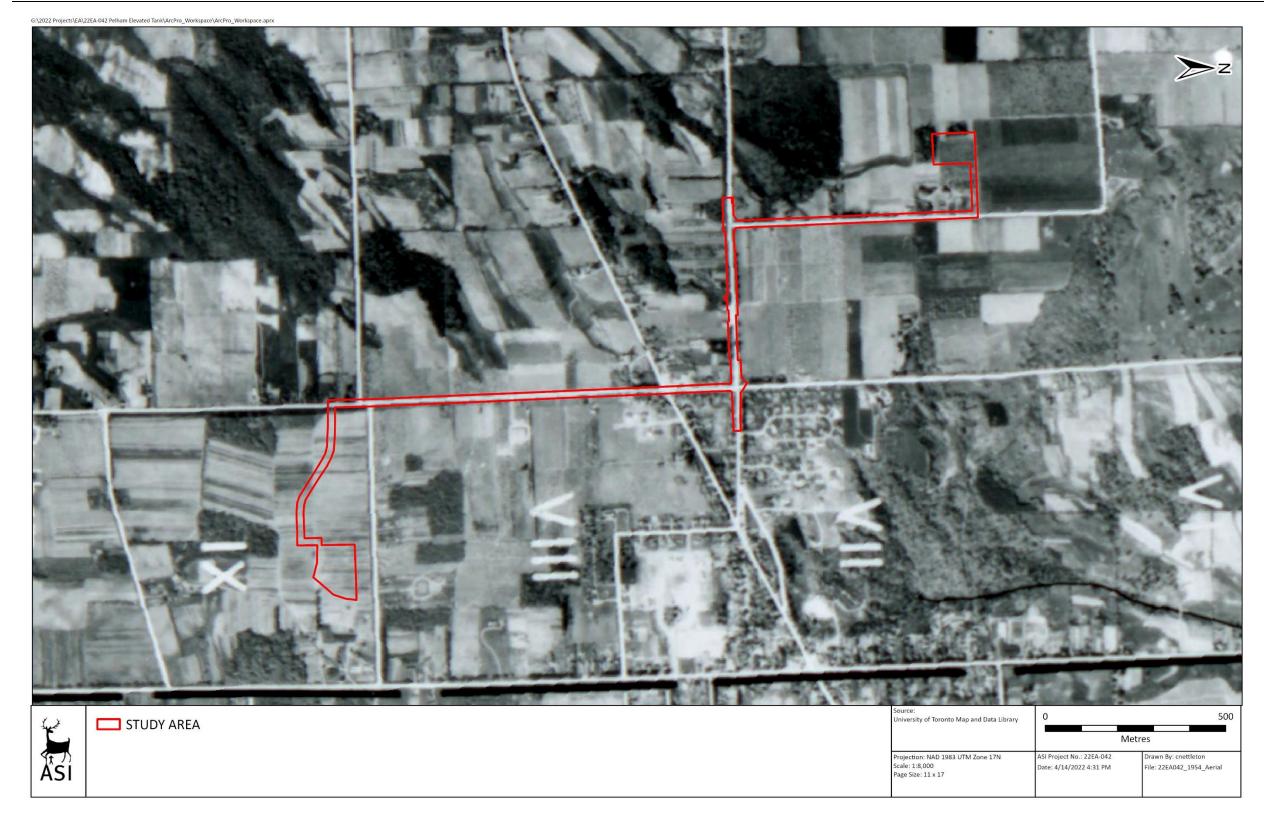


Figure 6: Study Area (Approximate Location) Overlaid on the 1954 Aerial Photography



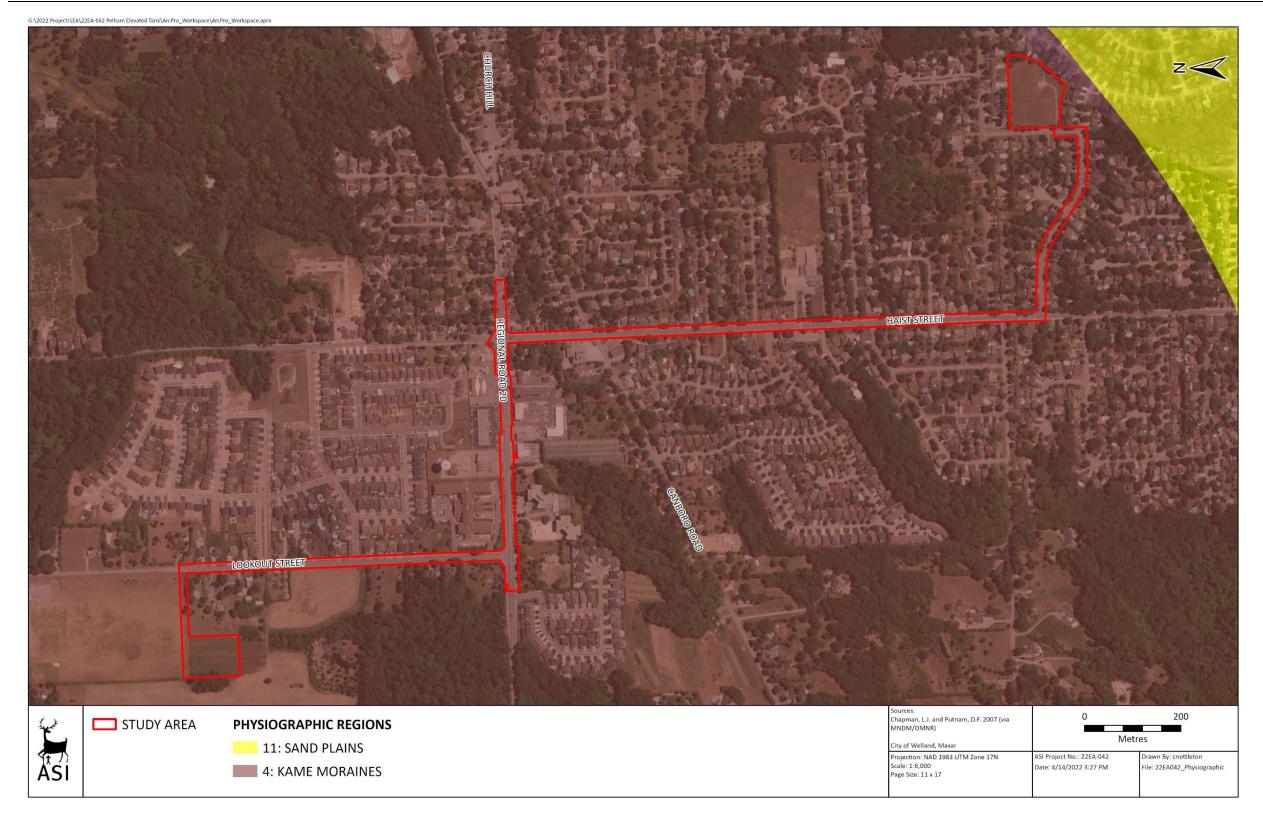


Figure 7: Study Area – Physiographic Regions



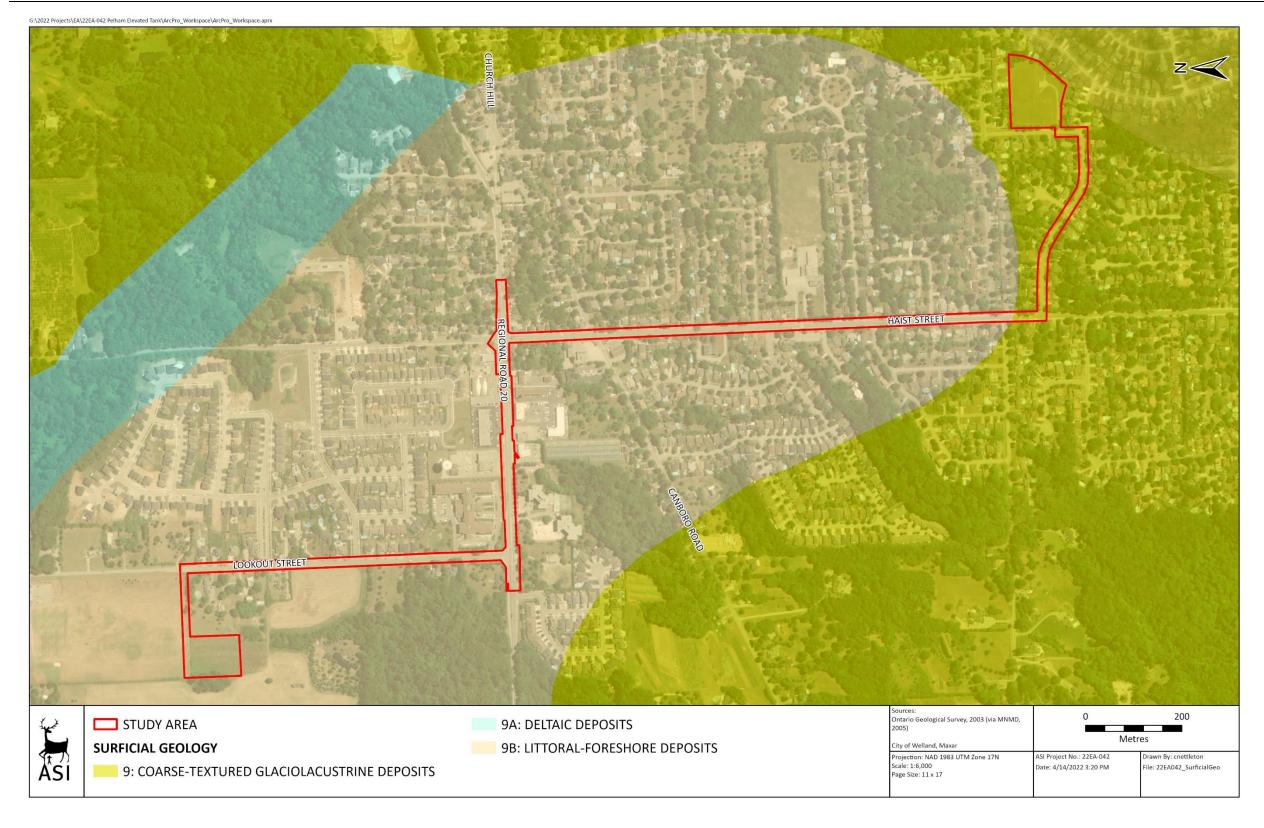


Figure 8: Study Area – Surficial Geology



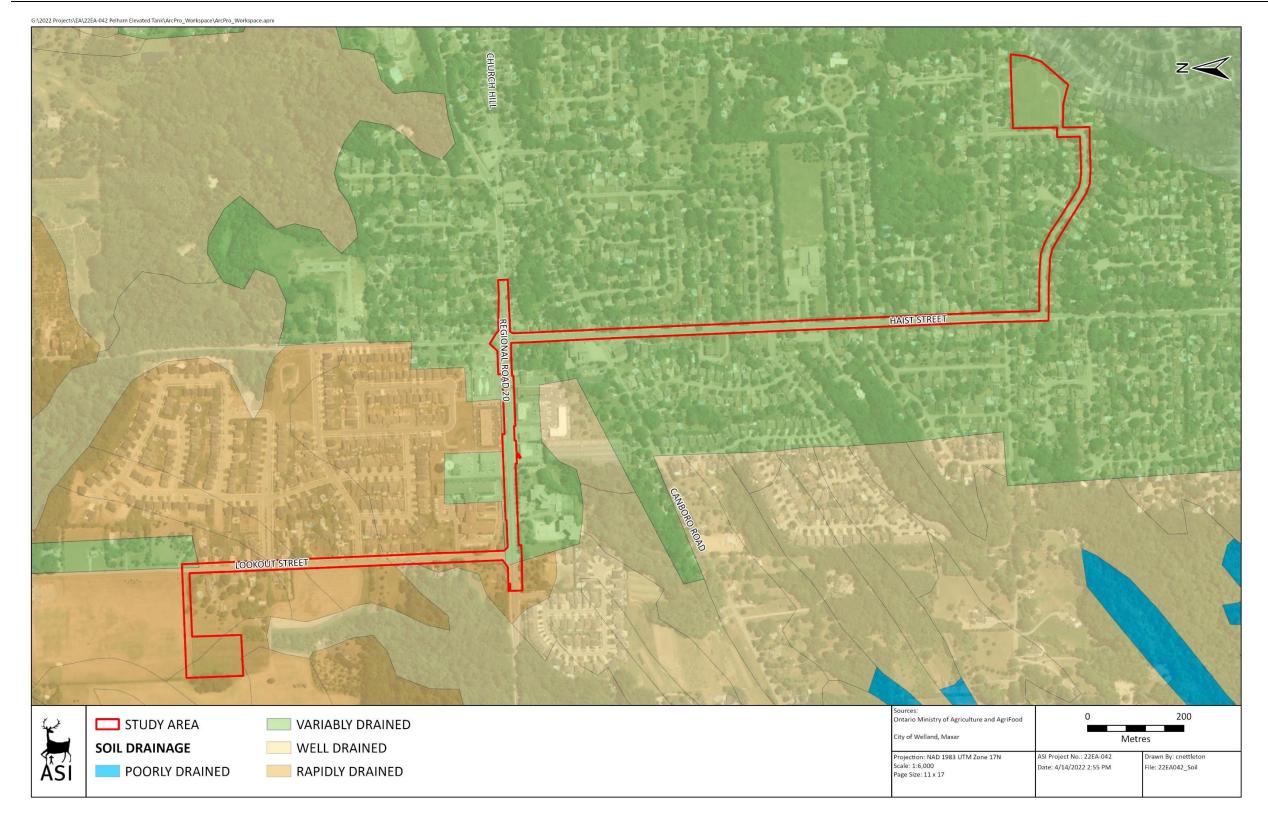


Figure 9: Study Area – Soil Drainage



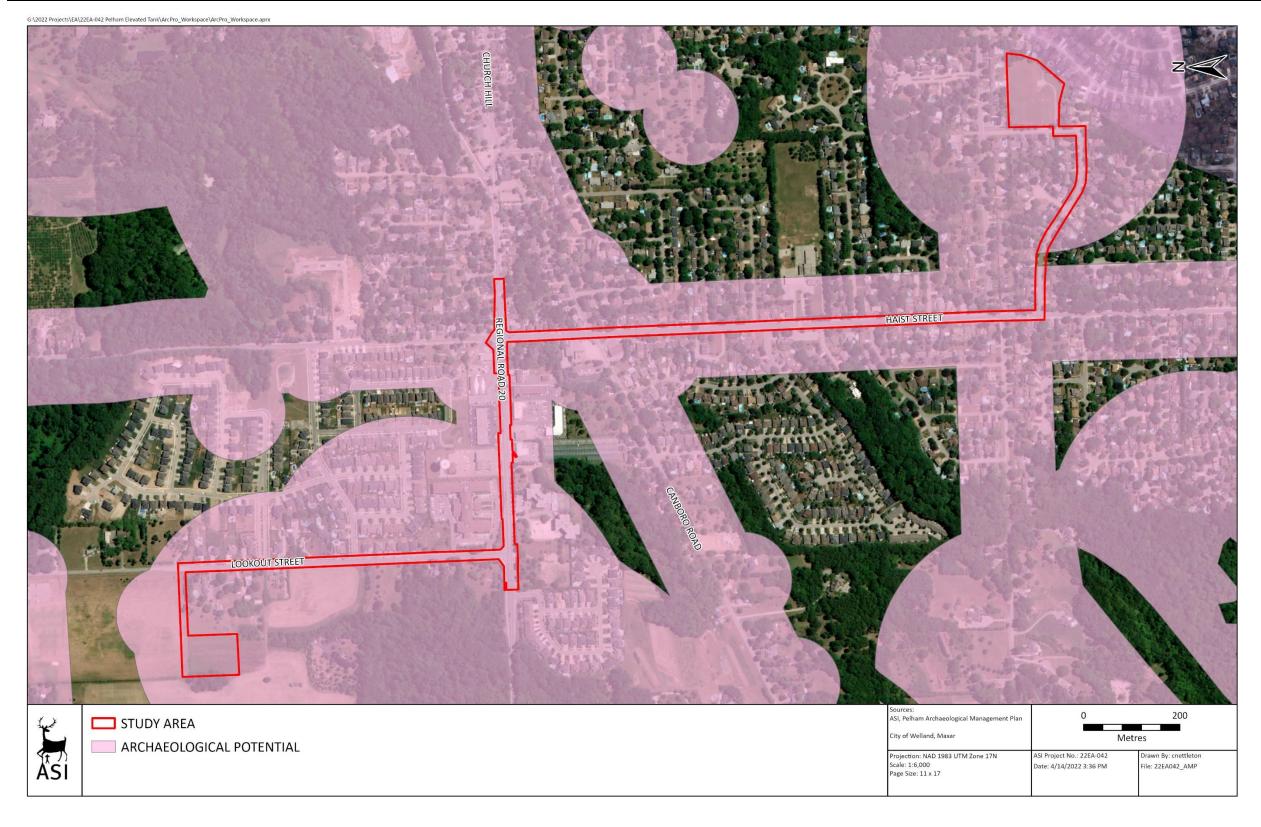


Figure 10: Study Area – Archaeological Potential Layer from the Pelham Archaeological Management Plan



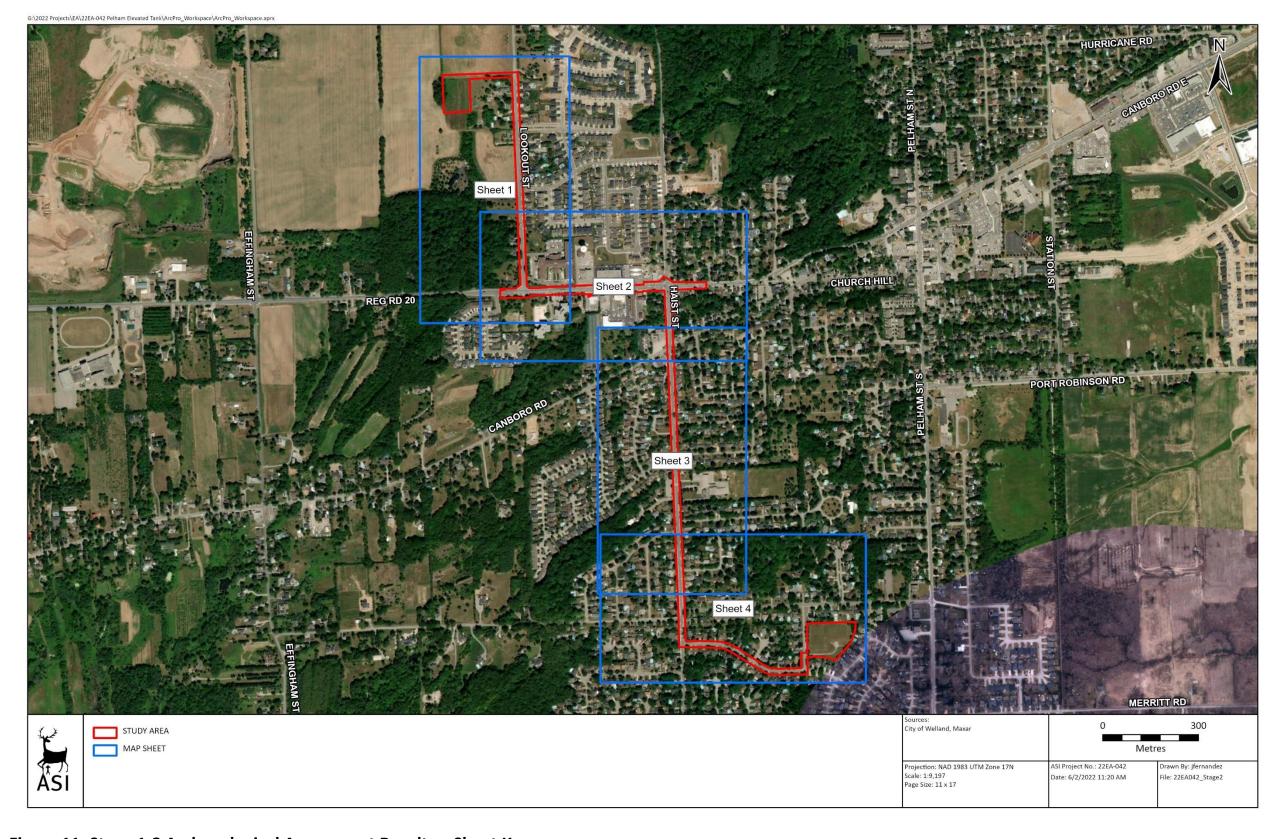


Figure 11: Stage 1-2 Archaeological Assessment Results – Sheet Key





Figure 12: Stage 1-2 Archaeological Assessment Results – Sheet 1





Figure 13: Stage 1-2 Archaeological Assessment Results – Sheet 2





Figure 14: Stage 1-2 Archaeological Assessment Results – Sheet 3





Figure 15: Stage 1-2 Archaeological Assessment Results – Sheet 4



Stage 1-2 Archaeological Assessment New Pelham Elevated Tank Environmental Assessment

Part of Lots 2-4, Concession 7; Lots 2-3, Concession 8; and Lots 1-3, Concession 9 (Geographical Township of Pelham, County of Welland), Town of Pelham, Niagara Region

Supplementary Documentation: Indigenous Community Engagement

Prepared for:

Niagara Region

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Archaeological Licence: P383 (Williams)

PIF P383-0321-2022

Archaeological Services Inc. File: 22EA-042

31 October 2023



1.0 Project Context

Indigenous community engagement was initiated by the Niagara Region prior to the start of the Stage 1-2 assessment for the New Pelham Elevated Tank Environmental Assessment in the Town of Pelham, Ontario (ASI 2022: P383-0321-2021). Communities were informed that ASI would be undertaking the Stage 1-2 assessment and would handle the logistical coordination of Stage 2 fieldwork scheduled to begin on June 14, 2022. Upon completion of fieldwork, the draft report was circulated for review. The contacted parties are listed below:

Haudenosaunee Development Institute:

- Todd Williams: Williams.todde@gmail.com
- Sharann Martin: Sharann.martin@gmail.com
- Owen Greene: Olgreene@hotmail.com

Mississaugas of the Credit First Nation:

- Adam LaForme: Adam.laforme@mncfn.ca
- Adrian Blake: Adrian.blake@mncfn.ca
- Field.coordinator@mncfn.ca

Six Nations of the Grand River Elected Council:

- Lonny Bomberry: Lonnybomberry@sixnations.ca
- Tanya Hill-Montour: Tanyahill-montour@sixnation.ca
- Dawn LaForme: Dlaforme@sixnations.ca

2.0 Record of Engagement

ASI received positives responses from the Mississaugas of the Credit First Nation and Six Nations of the Grand River Elected Council indicating their interest in participation during Stage 2 fieldwork. ASI did not receive a response from the Haudenosaunee Development Institute.



The Stage 2 property survey for the New Pelham Elevated Tank Environmental Assessment was conducted from June 14-17, 2022, under the field direction of Jacob Roberts (R1291) in accordance with the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists*, Section 2 (MTC, 2011).

During the execution of the Stage 2 survey, Field Liaison Representatives from the Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River Elected Council (SNGREC) were on-site monitoring and providing input on the assessment. Specific dates of fieldwork and Field Liaison Representatives are listed below in Table 1.

Table 1: Indigenous Field Liaison Representatives on Site

Dates	Field Liaison Representatives	
June 14, 2022	Hannah LaForme (MCFN)	
June 15, 2022	Hannah LaForme (MCFN), Taylor Hill (SNGREC)	
June 16, 2022	Hannah LaForme (MCFN)	
June 17, 2022	Hannah LaForme (MCFN), Shawn Anthony (SNGREC)	

No concerns were expressed during the Stage 2 property survey. The results of this assessment and a copy of the final report were shared with the communities to keep all parties updated and informed (ASI 2022).

Table 2 below provides a record of all communications and comments received from Indigenous communities throughout the draft report review process.



Table 2: Record of Communications

Date	Method of Communication	Community	Summary
December 8, 2022	Email	HDI, MCFN, Six Nations	Draft report circulated for review and comment

No comments or concerns were express with the Stage 1-2 archaeological assessment report.

3.0 Bibliography and Sources

Archaeological Services Inc. (2022). Stage 1-2 Archaeological Assessment New Pelham Elevated Tank Environmental Assessment, Part of Lots 2-4, Concession 7; Lots 2-3, Concession 8; and Lots 1-3, Concession 9 (Geographical Township of Pelham, County of Welland), Town of Pelham, Niagara Region. PIF P383-0321-2021. Report on File with the Ministry of Heritage, Sport, Tourism and Culture Industries.

MTC, (Ministry of Tourism and Culture). (2011). Standards and Guidelines for Consultant Archaeologists. Cultural Programs Branch, Ontario Ministry of Tourism and Culture.

