APPENDIX D
Archaeological Investigations

Stage 1 Archaeological Assessment
Hamilton Elevated Water Storage Facility and Pumping Station
Part of Lots 24 & 34, Concession 8,
Lots 14 & 16, Concession 2,
Block 5 Lot 7 & Block 4 Lot 5, Concession 1
(Former Township of Saltfleet, Glanford and Binbrook)
County of Wentworth
City of Hamilton, Ontario

ORIGINAL REPORT

Prepared for:

Cole Engineering Group Ltd.
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Archaeological Licence #P1066 (Lytle)
Ministry of Tourism, Culture and Sport PIF# P1066-0074-2018
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25 May 2018

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Part of Lots 24 & 34, Concession 8,
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Block 5 Lot 7 & Block 4 Lot 5, Concession 1
(Former Township of Saltfleet, Glanford and Binbrook)
County of Wentworth
City of Hamilton, Ontario

EXECUTIVE SUMMARY

ASI was contracted by Cole Engineering Group Ltd. to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Hamilton Elevated Water Storage Facility and Pumping Station in the City of Hamilton. This project involves identifying a location for a new elevated reservoir and pumping station. The Study Area is defined as the eight candidate sites, including Pumping Station (PS) Sites 1-3 and Elevated Water Storage Facility (EWSF) Sites 1-5.

The Stage 1 background study determined that 82 previously registered archaeological sites are located within one kilometre of the Study Area, one of which is within 50 m of EWSF Site 4 and exhibits further CHVI. The property inspection determined that PS Sites 1 and 2 and EWSF Sites 1, 2, and 5 exhibit archaeological potential and will require Stage 2 assessment, prior to any impacts.

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

1. PS Sites 1 and 2 and EWSF Sites 1, 2 and 5 exhibit archaeological potential and will require Stage 2 archaeological assessment by test pit/pedestrian survey, both at five metre intervals, where appropriate, prior to any proposed impacts to the property;

2. AhGw-271 is within 50 metres of EWSF Site 4 and should be subject to Stage 3 archaeological assessment, if impacted, prior to any development;

3. PS Site 3 and EWSF Sites 3 and 4 have been previously subject to Stage 2 survey and do not require further archaeological assessment;

4. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance and low and wet conditions. These lands do not require further archaeological assessment; and,

5. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

ASI

PROJECT PERSONNEL

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by Cole Engineering Group Ltd. to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Hamilton Elevated Water Storage Facility and Pumping Station in the City of Hamilton (Figure 1). This project involves identifying a location for a new elevated reservoir and pumping station. The Study Area is defined as the eight candidate sites, including Pumping Station (PS) Sites 1-3 and Elevated Water Storage Facility (EWSF) Sites 1-5.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2018) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS 2011).

In the S & G, Section 1, the objectives of a Stage 1 archaeological assessment are discussed as follows:

- To provide information about the history, current land conditions, geography, and previous archaeological fieldwork of the Study Area;
- To evaluate in detail the archaeological potential of the Study Area that can be used, if necessary, to support recommendations for Stage 2 archaeological assessment for all or parts of the Study Area; and,
- To recommend appropriate strategies for Stage 2 archaeological assessment, if necessary.

This report describes the Stage 1 archaeological assessment that was conducted for this project and is organized as follows: Section 1.0 summarizes the background study that was conducted to provide the historical and archaeological contexts for the project Study Area; Section 2.0 addresses the field methods used for the property inspection that was undertaken to document its general environment, current land use history and conditions of the Study Area; Section 3.0 analyses the characteristics of the project Study Area and evaluates its archaeological potential; Section 4.0 provides recommendations; and the remaining sections contain other report information that is required by the S & G, e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (Ministry of the Environment 1990 as amended 2010) 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* (2000 as amended in 2007, 2011 and 2015).

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by Cole Engineering Group Ltd. on April 11, 2018.

1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information pertaining to the Study Area. A summary is first presented of the current understanding of the Indigenous land use of the Study Area. This is then followed by a review of the historical Euro-Canadian settlement history.

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 and Fritz 1988) and populations now occupied less extensive territories (Ellis and 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 (Ellis et al. 1990, 2009; Brown 1995:13).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. Exchange and interaction networks broaden at this time (Spence et al. 1990:136, 138) and by approximately 2,000 BP, evidence exists for macro-band camps, focusing on the seasonal harvesting of resources (Spence et al. 1990:155, 164). It is also during this period that maize was first introduced into southern Ontario, though it would have only supplemented people's diet (Birch and Williamson 2013:13–15). Bands likely retreated to interior camps during the winter. It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From approximately 1,000 BP until approximately 300 BP, lifeways became more similar to that described in early historical documents. During the Early Iroquoian phase (AD 1000-1300), 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 1990:317). By the second quarter of the first millennium BP, during the Middle Iroquoian phase (AD 1300-1450), this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). In the Late Iroquoian phase (AD 1450-1649) this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). 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 AD 1600, the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the

traditional enmity between the Haudenosaunee[1] and the Huron-Wendat (and their Algonkian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat.

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". In subsequent years, the French visited and traded among the Neutral, but the first documented visit was not until 1626, when the Recollet missionary Joseph de la Roche Daillon recorded his visit to the villages of the Attiwandaron, whose name in the Huron-Wendat language meant "those who speak a slightly different tongue" (the Neutral apparently referred to the Huron-Wendat by the same term). Like the Huron-Wendat, Petun, and Haudenosaunee, the Neutral people were settled village agriculturalists. Several discrete settlement clusters have been identified in the lower Grand River, Fairchild-Big Creek, Upper Twenty Mile Creek, Spencer-Bronte Creek drainages, Milton, Grimsby, Eastern Niagara Escarpment and Onondaga Escarpment areas, which are attributed to Iroquoian populations. These settlement clusters are believed by some scholars to have been inhabited by populations of the Neutral Nation or pre- (or ancestral) Neutral Nation (Lennox and Fitzgerald 1990).

Between 1647 and 1651, the Neutral were decimated by epidemics and ultimately dispersed by the Haudenosaunee, who subsequently settled along strategic trade routes on the north shore of Lake Ontario for a brief period during the mid seventeenth-century. Compared to settlements of the Haudenosaunee, the "Iroquois du Nord" occupation of the landscape was less intensive. Only seven villages are identified by the early historic cartographers on the north shore, and they are documented as considerably smaller than those in New York State. The populations were agriculturalists, growing maize, pumpkins, and squash. These settlements also played the important alternate role of serving as stopovers and bases for Haudenosaunee travelling to the north shore for the annual beaver hunt (Konrad 1974).

Due, in large part, to increased military pressure from the French upon their homelands south of Lake Ontario, the Haudenosaunee abandoned their north shore frontier settlements by the late 1680s, although they did not relinquish their interest in the resources of the area, as they continued to claim the north shore as part of their traditional hunting territory. The territory was immediately occupied or re-occupied by Anishinaabek groups, including the Mississauga, Ojibwa (or Chippewa) and Odawa, who, in the early seventeenth century, occupied the vast area extending from the east shore of Georgian Bay, and the north shore of Lake Huron, to the northeast shore of Lake Superior and into the upper peninsula of Michigan. Individual bands were politically autonomous and numbered several hundred people. Nevertheless, they shared common cultural traditions and relations with one another and the land. These groups were highly mobile, with a subsistence economy based on hunting, fishing, gathering of wild plants, and garden farming. Their movement southward also brought them into conflict with the Haudenosaunee.

Peace was achieved between the Haudenosaunee and the Anishinaabek Nations in August of 1701 when representatives of more than twenty Anishinaabek Nations assembled in Montreal to participate in peace negotiations (Johnston 2004:10). During these negotiations captives were exchanged and the Iroquois and Anishinaabek agreed to live together in peace. Peace between these nations was confirmed again at council held at Lake Superior when the Iroquois delivered a wampum belt to the Anishinaabek Nations.

[1] The Haudenosaunee are also known as the New York Iroquois or Five Nations Iroquois and after 1722 Six Nations Iroquois. They were a confederation of five distinct but related Iroquoian–speaking groups - the Seneca, Onondaga, Cayuga, Oneida, and Mohawk. Each lived in individual territories in what is now known as the Finger Lakes district of Upper New York. In 1722 the Tuscarora joined the confederacy.

In 1763, following the fall of Quebec, New France was transferred to British control at the Treaty of Paris. The British government began to pursue major land purchases to the north of Lake Ontario in the early nineteenth century, the Crown acknowledged the Mississaugas as the owners of the lands between Georgian Bay and Lake Simcoe and entered into negotiations for additional tracts of land as the need arose to facilitate European settlement.

The eighteenth century saw the ethnogenesis in Ontario of the Métis, when Métis people began to identify as a separate group, rather than as extensions of their typically maternal First Nations and paternal European ancestry (Métis National Council n.d.). Living in both Euro-Canadian and Indigenous societies, the Métis acted as agents and subagents in the fur trade but also as surveyors and interpreters. Métis populations were predominantly located north and west of Lake Superior, however, communities were located throughout Ontario (MNC n.d.; Stone and Chaput 1978:607,608). During the early nineteenth century, many Métis families moved towards locales around southern Lake Huron and Georgian Bay, including Kincardine, Owen Sound, Penetanguishene, and Parry Sound (MNC n.d.). By the mid-twentieth century, Indigenous communities, including the Métis, began to advance their rights within Ontario and across Canada, and in 1982, the Métis were federally recognized as one of the distinct Indigenous peoples in Canada. Recent decisions by the Supreme Court of Canada (Supreme Court of Canada 2003, 2016) have reaffirmed that Métis people have full rights as one of the Indigenous people of Canada under subsection 91(24) of the Constitution Act, 1867.

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).

1.2.2 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in the County of Wentworth on part of Lots 24 & 34, Concession 8, Saltfleet Township; Lots 14 & 16, Concession 2, Glanford Township; and Block 5 Lot 7 & Block 4 Lot 5, Concession 1, Binbrook Township.

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 m 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 2006a).

Saltfleet Township

The land within Saltfleet Township was acquired by the British from the Mississaugas in 1784. The first township survey was undertaken in 1788 by Augustus Jones, and the first legal settlers occupied their land holdings in the same year. The township was named for several saline springs which existed in the bed of the Big Creek and produced salt. Saltfleet was initially settled by disbanded soldiers, mainly Butler's Rangers, and other Loyalists following the end of the American Revolutionary War. Among the first settlers were Levi Lewis, John Pettit, Gershom Carpenter, Augustus Jones, John Biggar, John Wilson, Samuel Dean, who took up land west of the 50 Mile Creek. In 1815 the first assessment rolls counted 102 householders. By the 1840s, the township was noted for its excellent land and well-cultivated farms (Boulton 1805:87; Smith 1846:163; Armstrong 1985:147; Rayburn 1997:305; W. H. Irwin & Co. 1905).

Glanford Township

Glanford was first surveyed in 1794 by non-government surveyor Davenport Phelps, and are therefore recorded as 188 acres. Many of the first land grants were made to absentee owners and only 45 families took up land in Glanford Township between 1788 and 1800. Glanford and Binbrook Townships were initially hindered by their relatively long distance from the lakeshore, and initially had large blocks of land, ranging from 1,000 acres and up, set aside for Clergy Reserves, chiefly for the benefit of the Church of England. Blocks were also granted to favoured friends of the Family Compact. Glanford was the smallest township in Wentworth County and only 50 ratepayers were listed in the 1815 land assessment with the majority of them English immigrants. By 1826, the population had reached only 500. Glanford's agricultural base developed more slowly than Ancaster, Saltfleet and parts of Flamborough because the soil was heavier and thus poorly drained and difficult to hand cultivate. It was not until 1847 that Glanford's cultivated acres overtook uncleared land and mixed farming expanded. Glanford's largest wave of immigration came in the 1850s.

Binbrook Township

The land within Binbrook Township was acquired by the British from the Mississaugas in 1784. The first township survey was undertaken in 1789, and the first legal settlers occupied their land holdings the same year. Early survey divided the township into four concessions, each containing five blocks of 1,000 acres each. The township is said to have been named after a town in Lincolnshire, England. Binbrook was initially settled by disbanded soldiers, mainly Butler's Rangers, and other Loyalists following the end of the American Revolutionary War. The first settler in the township of Binbrook is said to have been Brian Condon, who took up residence on the first concession in the early 1800s. Binbrook's economy has been agriculturally based since the first settlers. In 1820 there were less than 20 families living in the township. By the 1840s, the township was described as "well settled". In 1841, there was a movement towards self-

government with the establishment of municipal councils. By 1850, the two principle settlements in Binbrook Township had been established; Hall's Corners (Binbrook), near the centre of the township, and Woodburn, in the southeast corner. Much of the township was covered in pine forest and this supplied the area with enough lumber to keep six sawmills operating in the township. By this time the 389 inhabitants of the township had cleared enough land to produce ten thousand bushels of wheat and eight thousand bushels of oats. In 1851, a municipality was formed between Wentworth, Halton and Brant counties. A year later, Brant County separated and by 1853, Halton too had separated from the municipality. In 1854, Wentworth municipality composed of: Ancaster, Barton, Beverly, Binbrook, Flamboro East, Flamboro West, Glandford, Waterdown and Dundas townships. In 1974 Binbrook Township amalgamated with the Township of Glanford in the newly formed Regional Municipality of Hamilton-Wentworth (Boulton 1805:74; Smith 1846:15; BHS 1979; Armstrong 1985:141; Rayburn 1997:32; Mika and Mika 1977:197).

Hamlet of Elfrida

The settlement area of the Village of Elfrida, formerly known as Clinesville and Swayze's Corners, is located at the junction of Rymal Road East/Regional Road (RR) 20 and Highway 56. In the early nineteenth century, Elfrida grew as a rural village that boasted several businesses; two hotels, a blacksmith operated by Philip Hendershot, a church, and a general store run by Arthur Spera. The Fletchers, Stewarts, Swayzes, Clines, Hendershots and the Quances were among the earliest settlers. In 1848, Hamilton George Swayze ran a general store and a post office. The Quance family bought land and operated a small mill, which later expanded to a grist mill. The village had two cemeteries: the Swayze cemetery on RR 56 and the Cline cemetery on Rymal Road/RR 20 (BHS 1979:170–171).

Hamilton & Lake Erie Railway

As early as 1835, Hamilton chartered the Hamilton & Port Dover Railroad to support the local economy between Lake Erie and Lake Ontario, as a short cut to the Welland Canal. The company did not officially charter until 1853, and another decade before construction started. The cost of driving the line up the Niagara Escarpment forced the company into bankruptcy and they were taken over by the newly-formed (H&LE) in 1869. Construction began on the Hamilton & Lake Erie Railway (H&LER) in 1873, but an economic downturn in 1875 left it incomplete. The Hamilton and Northwestern Railway (H&NWR) proposed a merger and eventually completed the railway line. In 1879 the H&NWR joined with Northern Railway (NR) and by 1888 was taken over by the Grand Trunk Railway (GTR) which amalgamated with Canadian National Railway (CN) in 1923. Approximately 70 kilometres have been registered as part of the Trans Canada Trail through Hamilton, including the converted rail corridors of the H&LER (Hamilton Conservation Authority 2018).

1.2.3 Historical Map Review

The Patent Plans of Saltfleet, Glanford, and Binbrook Townships (Jones 1791; Ridout 1811), the 1859 Map of the County of Wentworth (Surtees 1859), and the 1875 Illustrated Historical Atlas of the County of Wentworth, Saltfleet Township page (Page & Smith 1875), were examined to determine the presence of historic features within the Study Area during the nineteenth century (Figures 2-4).

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally proceeds by using common reference points between the various sources. These sources are then geo-referenced in order to provide the most accurate determination of the location of any property on historic mapping sources. The results of such exercises are often imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including the vagaries of map production (both past and present), the need to resolve differences of scale and resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping.

Table 1: Nineteenth-century property owner(s) and historical features(s) within or adjacent to the Study Area

		Patent Plan	*1859*		*1875*	
Saltfleet Township						
Con #	**Lot #**	**Property Owner(s)**	**Property Owner(s)**	**Historical Feature(s)**	**Property Owner(s)**	**Historical Feature(s)**
8	24		John Cline	None	John Cline	House
	34	E. Murray	Dan Fletcher	None	Essex Horning None	Farmstead House
Glanford Township						
2	14	Clergy	Wm Patterson H Hannon	None None	Wm. G. Walker Jas. VanMere	Farmstead House
	16	Anne Smith Walter Kerr	Johnathan Kelly	None	J. Kelly	House
Binbrook Township						
1	Block 4 Lot 5	James Brock	John B Stewart	None	J.B. Stewart Wm. H. Woodhouse	None House
	Block 5	Stephen Jones	E. Stewart	None	E. Stewart	House

The 1859 map illustrates that Rymal Road/RR 20, Upper Centennial Parkway, Fletcher Road, and Trinity Church Road were historically surveyed. The village of Clinesville (Elfrida) and the Hamilton & Port Dover Railroad are shown. No structures are illustrated within or adjacent to the Study Area.

The 1875 map shows that Glover Road had been surveyed and that Twenty Road East extended all the way to Trinity Church Road. Elfrida is shown just west of PS Site 1. No structures are illustrated within the Study Area, however it is adjacent to various structures.

1.2.4 Twentieth-Century Mapping Review

The 1907 and 1996 National Topographic System Grimsby Sheet, as well as the 1965 aerial photography of Hamilton, were examined to determine the extent and nature of development and land uses within the Study Area (Figures 5-7).

The 1907 map illustrates that the Study Area was adjacent to the village of Elfrida with no structures shown in any of the proposed sites. A brick structure is shown just south of PS Site 2 and PS Site 3. The

1954 photograph illustrates that the Study Area remained within a rural agricultural landscape into the mid-twentieth century. PS Site 1 is shown to have the topsoil cleared and an arcing road between Upper Centennial Parkway and Rymal Road. One structure is shown within PS Site 2. The existing house adjacent to EWSF Site 1 and barns adjacent to EWSF Site 5 can be seen. The 1996 map illustrates the Study Area remained unchanged into the late twentieth century.

A review of available Google satellite imagery shows that a parking lot was located within PS Site 1 until it was converted into a work site in 2016 for construction of the sewer. PS Site 3 contained a twentieth-century house prior to 2015. PS Site 2 and EWSF Sites 1-5 have remained unchanged since 2005.

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 MTCS through "Ontario's Past Portal"; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

A Stage 1 property inspection was conducted on May 2, 2018 that noted the Study Area is located in the City of Hamilton at the top of the Niagara Escarpment within a predominantly rural agricultural landscape.

PS Site 1 is approximately 1.85 ha located at the northeast corner of Upper Centennial Parkway and Rymal Road East/RR 20 in the village of Elfrida within a fallow field. Part of the site is currently under construction for a sewer tunnel surrounded by a wood fence and access from both roads.

PS Site 2 is approximately 1.23 ha located north of PS Site 1 on the east side of Upper Centennial Parkway. A deep ditch runs along the right-of-way at the edge of the site, which is within an agricultural field, part of which is fallow adjacent to the road and part of which is active in the eastern edge of the site.

PS Site 3 is approximately 0.35 ha located on the northeast side of Rymal Road East and the recently constructed extension of the Upper Red Hill Valley Parkway, west of Trinity Church Road. The site is adjacent to a mid-twentieth-century residential property and multi-use path.

EWSF Site 1 is approximately 1.54 ha located on the west side of the road south of the mid-twentieth-century house at 262 Fletcher Road, south of Blue Mountain Drive. The site is within an active agricultural field. A tributary of Sinkhole Creek runs roughly east-west through the site.

EWSF Site 2 is approximately 1.63 ha located on the east side of Fletcher Road, south of EWSF Site 1, within an active agricultural field between two farmsteads. A tributary of Sinkhole Creek runs roughly east-west through the site.

EWSF Site 3 is approximately 0.86 ha located on the west side of the road within an active agricultural field at 420 Trinity Church Road.

EWSF Site 4 is approximately 1.1 ha located on the east side of Glover Road within an active agricultural field on the 420 Trinity Church Road property.

EWSF Site 5 is approximately 3.14 ha located on the north side of the road within an active agricultural field west of the farm at 5420 Dickenson Road East.

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 and 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 within the Haldimand Clay Plain physiographic region of southern Ontario (Figure 8). All the sites except PS Site 3, which is on clay plains, are within a till moraine. The Haldimand Clay Plain (Chapman and Putnam 1984:156–159) is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500 square km (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.

The Niagara Escarpment, located north of the Study Area, is by far one of the most prominent features in southern Ontario, and extends from the Niagara River to the northern tip of the Bruce Peninsula, continuing through the Manitoulin Islands (Chapman and Putnam 1984:114–122). Vertical cliffs along the brow mostly outline the edge of the dolostone of the Lockport and Amabel Formations, while the slopes below are carved in red shale. Flanked by landscapes of glacial origin, the rock-hewn topography stands in striking contrast, and its steep-sided valleys are strongly suggestive of non-glacial regions. From Queenston, on the Niagara River, westward to Ancaster, the escarpment is a simple topographic break separating the two levels of the Niagara Peninsula. The Niagara Escarpment is a designated UNESCO World Biosphere Reserve.

Figure 9 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by fine-textured glaciolacustrine deposits of silt and clay, with part of PS Site 2 located in clay to silt-textured till (Ontario Geological Survey 2010).

Soil drainage is illustrated on Figure 10. Soils consist of Oneida silt loam (Oi), a grey brown podzolic with good drainage; Smithville silt loam (Sm), a grey brown podzolic with moderate drainage; Chinguacousy silt loam (Ci), Binbrook silt loam (Bi), Beverly silt loam (Bl), and Haldimand silt clay loam (Hi), all of which are grey brown podzolic soils with imperfect drainage; and Lincoln silty clay loam (Ln), a humic gleysol with poor drainage.

- EWSF Site 1 – Sm
- EWSF Site 2 – Bl and Sm
- EWSF Site 3 – Bl
- EWSF Site 4 – Bl and Oi
- EWSF Site 5 – Bl and Oi
- PS Site 1 – Ci and Sm
- PS Site 2 – Hl, Ln, and Sm
- PS Site 3 – Bi and Sm

The Study Area is within the Stoney Creek and Hannon Creek subwatersheds within the Red Hill Creek watershed, as well as Sinkhole Creek and Twenty Mile Creek subwatersheds in the Twenty Mile Creek watershed (Hamilton Conservation Authority 2013; Niagara Peninsula Conservation Authority 2006).

1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. 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 km east to west, and approximately 18.5 km 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 blocks *AhGw*, *AgGx*, and *AgGw*.

According to the OASD, 82 previously registered archaeological sites are located within one kilometre of the Study Area (Ministry of Tourism, Culture and Sport 2018). One site is located within EWSF Site 3, and one site is within 50 m of EWSF Site 4.A summary of the sites is provided below.

Table 2: List of previously registered sites within one kilometre of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AgGw-8	P. Fletcher	Early-Late Archaic	Camp	MPPA 1988
AgGw-19	J. Swayze	Euro-Canadian	Homestead	MPPA 1988
AhGw-028	Soley 1	Pre-Contact Indigenous	Unknown	Leslie 1977
AhGw-068	Clinte Site	Euro-Canadian	Homestead	MAS 1988
AhGw-69	n/a	Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-70	n/a	Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-71	n/a	Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-72	n/a	Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-73		Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-74		Pre-Contact Indigenous	Findspot	MPPA 1988
AhGw-75	A. Swayze	Euro-Canadian; Pre-Contact Indigenous	Homestead; Camp	MPPA 1988
AhGw-84	Felker Stage 2-I	Pre-Contact Indigenous	Scatter	ASI 1990, 1991
AhGw-85	Felker Stage 2-II	Pre-Contact Indigenous	Scatter	ASI 1990
AhGw-102	Heritage Green	Euro-Canadian	Homestead	RGS 1993
AhGw-104	Heritage Green	Pre-Contact Indigenous	Findspot	RGS 1993
AhGw-138	n/a	Pre-Contact Indigenous	Camp	Detritus 2000
AhGw-162	n/a	Pre-Contact Indigenous	Findspot	NDA 2003
AhGw-163	n/a	Pre-Contact Indigenous	Camp	NDA 2003
AhGw-164	Long Walk In	Pre-Contact Indigenous; Euro-Canadian	Findspot; Cabin	NDA 2003
AhGw-166	n/a	Pre-Contact Indigenous	Scatter	NDA 2003
AhGw-170	n/a	Pre-Contact Indigenous	Hunting	Detritus 2004
AhGw-175	n/a	Late Archaic	Findspot	NDA 2004
AhGw-176	n/a	Pre-Contact Indigenous	Findspot	NDA 2004
AhGw-179	Deerfield	Pre-Contact Indigenous	Camp	NDA 2004
AhGw-182	n/a	Pre-Contact Indigenous	Hunting	Detritus 2005
AhGw-183	n/a	Pre-Contact Indigenous	Processing	Detritus 2005
AhGw-184	n/a	Pre-Contact Indigenous	Camp	Detritus 2005
AhGw-185	n/a	Pre-Contact Indigenous	Processing	Detritus 2005
AhGw-186	n/a	Pre-Contact Indigenous	Processing	Detritus 2005
AhGw-187	n/a	Pre-Contact Indigenous	Processing	Detritus 2005
AhGw-188	n/a	Pre-Contact Indigenous	Camp	Detritus 2005
AhGw-189	n/a	Pre-Contact Indigenous	Processing	Detritus 2005

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AhGw-190	n/a	Euro-Canadian	Farmstead	Detritus 2005
AhGw-191	Pottruff	Euro-Canadian; Pre-Contact Indigenous	Unknown	AAL 2005
AhGw-192	Swampy Rise	Pre-Contact Indigenous	Unknown	AAL 2005
AhGw-193	Kennedy Site	Euro-Canadian	Unknown	ASI 2006; Archeoworks 2010; TMHC 2011
AhGw-194	Pottruff Site	Euro-Canadian	Homestead	ASI 2006; Archeoworks 2010; TMHC 2011
AhGw-195	n/a	Pre-Contact Indigenous	Findspot	ASI 2006
AhGw-196	n/a	Pre-Contact Indigenous	Scatter	ASI 2006
AhGw-197	n/a	Pre-Contact Indigenous	Scatter	ASI 2006
AhGw-198	n/a	Pre-Contact Indigenous	Scatter	ASI 2006
AhGw-199	n/a	unknown	unknown	Sutton 2005
AhGw-200	n/a	unknown	unknown	Sutton 2005
AhGw-201	n/a	unknown	unknown	Sutton 2005
AhGw-202	n/a	unknown	unknown	Sutton 2005
AhGw-203	n/a	unknown	unknown	Sutton 2005
AhGw-219	Soley III Site	Pre-Contact Indigenous	Scatter	ASI 2006
AhGw-220	Soley IV	Pre-Contact Indigenous	Scatter	AAL 2006
AhGw-221	Soley V	Pre-Contact Indigenous	Scatter	AAL 2006
AhGw-222	Soley VI	Early Archaic	Scatter	AAL 2006
AhGw-223	Soley VII	Pre-Contact Indigenous	Scatter	AAL 2006
AhGw-224	n/a	Late Archaic	Findspot	AAL 2006
AhGw-225	Soley IX	Late Archaic	Findspot	AAL 2006
AhGw-227	Soley XI	Middle Archaic	Scatter	AAL 2006
AhGw-229	Stewart I	Euro-Canadian	Unknown	AAL 2006
AhGw-233	n/a	Euro-Canadian	Dump	ASI 2006
AhGw-234	n/a	Euro-Canadian	Dump	ASI 2006
AhGw-235	n/a	Pre-Contact Indigenous	Scatter	ASI 2006
AhGw-236	n/a	Pre-Contact Indigenous	Scatter	TMHC 2006
AhGw-237	n/a	Early Woodland	Findspot	ASI 2006
AhGw-238	n/a	Pre-Contact Indigenous	Findspot	ASI 2006
AhGw-239	n/a	Pre-Contact Indigenous	Findspot	Pearce 1998
AhGw-256	Yeager	Euro-Canadian	Homestead	ASI 2009
AhGw-265	Upper Centennial P3	Pre-Contact Indigenous	Scatter	Archeoworks Inc. 2007

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AhGw-266	Horning	unknown	unknown	AMICK 2008
AhGw-269	n/a	Archaic: Lamoka	Camp	Golder 2008
AhGw-271	*n/a*	*Early Archaic*	*Findspot*	*NDA 2009*
AhGw-272	n/a	Late Archaic	Findspot	NDA 2009
AhGw-273	**n/a**	**Indigenous Pre-Contact**	**Findspot**	**NDA 2009**
AhGw-274	n/a	Late Archaic	Findspot	NDA 2009
AhGw-275	n/a	Late Archaic	Findspot	NDA 2009
AhGw-276	n/a	Late Archaic	Scatter	NDA 2009
AhGw-277	n/a	Indigenous Pre-Contact	Scatter	NDA 2009
AhGw-281	Mount Albion I	Indigenous Pre-Contact	Camp	URS 2010
AhGw-282	Mount Albion II	Indigenous Pre-Contact	Camp	URS 2010
AhGw-283	Mount Albion III	Indigenous Pre-Contact	Camp	URS 2010
AhGw-534	Highland Road	Euro-Canadian; Indigenous Pre-Contact	Dump; Unknown	NDA 2015, 2016, 2017
AhGw-539	Susannah Fletcher	Indigenous Pre	Contact	Fossil Hill Group 2018
AhGx-609	n/a	Late Archaic	Findspot	AMAA 2005
AhGx-721	n/a	Late Archaic: Innes; Woodland: Meadowood	Camp	Detritus 2011; AFW 2016
AhGx-722	n/a	Early Woodland	Camp	Detritus 2011; AFW 2016
AhGx-723	n/a	Euro-Canadian	Farmstead	Detritus 2011; AFW 2015

AAL – Archaeological Assessments Ltd
AFW – Amec Foster Wheeler
AMAA – Andrew Murray Archaeological Associates
MAS – Michael Archaeological Services
MPPA – Mayer, Pihl, Poulton & Associates Inc.
NDA – New Directions Archaeology Ltd.
TMHC – Timmins Martelle Heritage Consultants Inc.

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

ASI (2006b) conducted a Stage 1 and 2 archaeological assessment of 1809 Rymal Road East approximately 3.8 hectares, adjacent to PS Site 3. The field survey in 2006 consisted of test pit and pedestrian survey at five metre intervals. The survey resulted in the identification of AhGw-235, a non-diagnostic scatter of Onondaga lithics, AhGw-233 and AhGw-234, both are twentieth-century Euro-Canadian deposits. A single findspot was also identified and not registered with a Borden number. Only AhGw-235 was recommended for Stage 3 assessment.

ASI (2009) conducted a Stage 1 archaeological assessment for the Hannon Creek Subwatershed Study Class EA, including all of PS Site 3 and EWSF Sites 3,4, and 5. A property inspection in 2008 identified that much of the northern lands within the study area had been disturbed by residential and industrial

development, but that most of the agricultural fields were within relatively flat to rolling topography, with numerous tributaries. These areas were recommended for Stage 2 survey prior to any development.

New Directions Archaeology (2009) conducted a Stage 1 and 2 archaeological assessment of 420 Trinity Church Road, including EWSF Sites 3 and 4. The field survey in 2009 consisted of pedestrian survey at five metre intervals. A total of thirteen findspots and two lithic scatters were identified, including AhGw-271 through AhGw-277. AhGw-273 is within EWSF Site 3 and consisted of three non-diagnostic Onondaga lithic artifacts within a 13m by 5m area. AhGw-271 is located approximately 40m south of EWSF Site 4 and consisted of a single Onondaga projectile point, missing the top and part of the base, resembling an Early Archaic Nettling point. AhGw-276 consisted of 30 flakes within a 15m by 10m area, and the artifacts were not collected to facilitate the relocation of the site. AhGw-276 was the only site recommended for Stage 3 assessment in the original report. In accordance with the current S & G Section 2.2, Standard 1b, isolated Early Archaic artifacts are considered to exhibit cultural heritage value or interest (CHVI), therefore AhGw-271 should be subject to Stage 3 archaeological assessment.

AMICK (2013) conducted a Stage 1 and 2 archaeological assessment of 1603-1645 Rymal Road East on approximately 2.92 hectares, including PS Site 3. The field survey in 2008 consisted of test pit survey at five metre intervals of any visually assessed undisturbed lands and 20 metre intervals to confirm disturbance. The Horning Site (AhGw-266) was identified, over 130m from PS Site 3, consisting of Euro-Canadian dating from the second half of the nineteenth into the twentieth century. The site is recommended for Stage 3 assessment.

Detritus Consulting Ltd. (2014) conducted a Stage 1 and 2 archaeological assessment of northeast of the intersection of Rymal Road and Upper Centennial Parkway in the City of Hamilton on 6.2 hectares proposed for development, adjacent to PS Site 1. The field survey in 2012 consisted of test pit and pedestrian survey at five metre intervals. A single scatter of lithic artifacts (Location 1) measuring 39m north-south by 9m east-west in the ploughed portion of the project area, and consisted of 15 non-diagnostic Onondaga debitage. The site is not considered to exhibit further cultural heritage value or impact and was not recommended for further archaeological assessment.

2.0 FIELD METHODS: PROPERTY INSPECTION

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 archaeological assessment property inspection was conducted under the field direction of Tara Jenkins (P357) of ASI, on May 2, 2018, in order to gain first-hand knowledge of the geography,

topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a visual inspection only and did not include excavation or collection of archaeological resources. Fieldwork was only conducted when weather conditions were deemed suitable, per S & G Section 2. Previously identified features of archaeological potential were examined; additional features of archaeological potential not visible on mapping were identified and documented as well as any features that will affect assessment strategies. Field observations are compiled onto the existing conditions of the Study Area in Section 7.0 (Figures 11-16) and associated photographic plates are presented in Section 8.0 (Plates 1-10).

3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. These data are presented below in Section 3.1. Results of the analysis of the Study Area property inspection are presented in Section 3.2.

3.1 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 2);
- Water sources: primary, secondary, or past water source (Stoney Creek, Sinkhole Creek, Hannon Creek, Twenty Mile Creek);
- Early historic transportation routes (Rymal Rd/RR 20, Upper Centennial Pkwy, Fletcher Rd, Trinity Church Rd);
- Proximity to early settlements (village of Elfrida, farmsteads); and
- Well-drained soils (Oneida silt loam)

According to the S & G, Section 1.4 Standard 1e, 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.

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

3.2 Analysis of Property Inspection Results

The property inspection determined that PS Sites 1 and 2 and EWSF Sites 1, 2 and 5 exhibit archaeological potential (Plates 1-10; Figure 8: areas highlighted in green and orange). These areas will require Stage 2 archaeological assessment prior to any development. According the S & G Section 2.1.1, pedestrian survey is required in actively or recently cultivated fields (eg. Plates 3-10). According to the S & G Section 2.1.2, test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow linear corridors up to 10 metres wide (eg. Plates 1, 2, 10).

The registered archaeological site AhGw-271 is located approximately 40m south of EWSF Site 4. In accordance with the current S & G Section 2.2, Standard 1b, isolated Early Archaic artifacts are considered to exhibit cultural heritage value or interest (CHVI), therefore AhGw-271 should be subject to Stage 3 archaeological assessment, prior to any proposed impacts.

PS Site 3 (AMICK Consultants Ltd. 2013) and EWSF Sites 3 and 4 (NDA 2009), have been previously assessed and do not require further archaeological assessment (Figures 13 and 15: areas highlighted in red).

The remainder of the Study Area has been subjected to deep soil disturbance events and according to the S & G Section 1.3.2 do not retain archaeological potential (Plates 1-3; Figure 8: areas highlighted in yellow). A part of the study area is located in low and wet conditions along Sinkhole Creek and a tributary of Twenty Mile Creek, and according to the S & G Section 2.1 does not retain potential (Figure 7: areas highlighted in blue). These areas do not require further survey.

3.3 Conclusions

The Stage 1 background study determined that 82 previously registered archaeological sites are located within one kilometre of the Study Area, one of which is within 50 m of EWSF Site 4 and exhibits further CHVI. The property inspection determined that PS Sites 1 and 2 and EWSF Sites 1, 2, and 5 exhibit archaeological potential and will require Stage 2 assessment, prior to any impacts.

4.0 RECOMMENDATIONS

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

1. PS Sites 1 and 2 and EWSF Sites 1, 2 and 5 exhibit archaeological potential and will require Stage 2 archaeological assessment by test pit/pedestrian survey, both at five metre intervals, where appropriate, prior to any proposed impacts to the property;

2. AhGw-271 is within 50 metres of EWSF Site 4 and should be subject to Stage 3 archaeological assessment, if impacted, prior to any development;

3. PS Site 3 and EWSF Sites 3 and 4 have been previously subject to Stage 2 survey and do not require further archaeological assessment;

4. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance and low and wet conditions. These lands do not require further archaeological assessment; and,

5. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

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. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MTCS should be immediately notified.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 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 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 Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological 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 *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

- 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, nor may artifacts be removed from them, except by a person holding an archaeological license.

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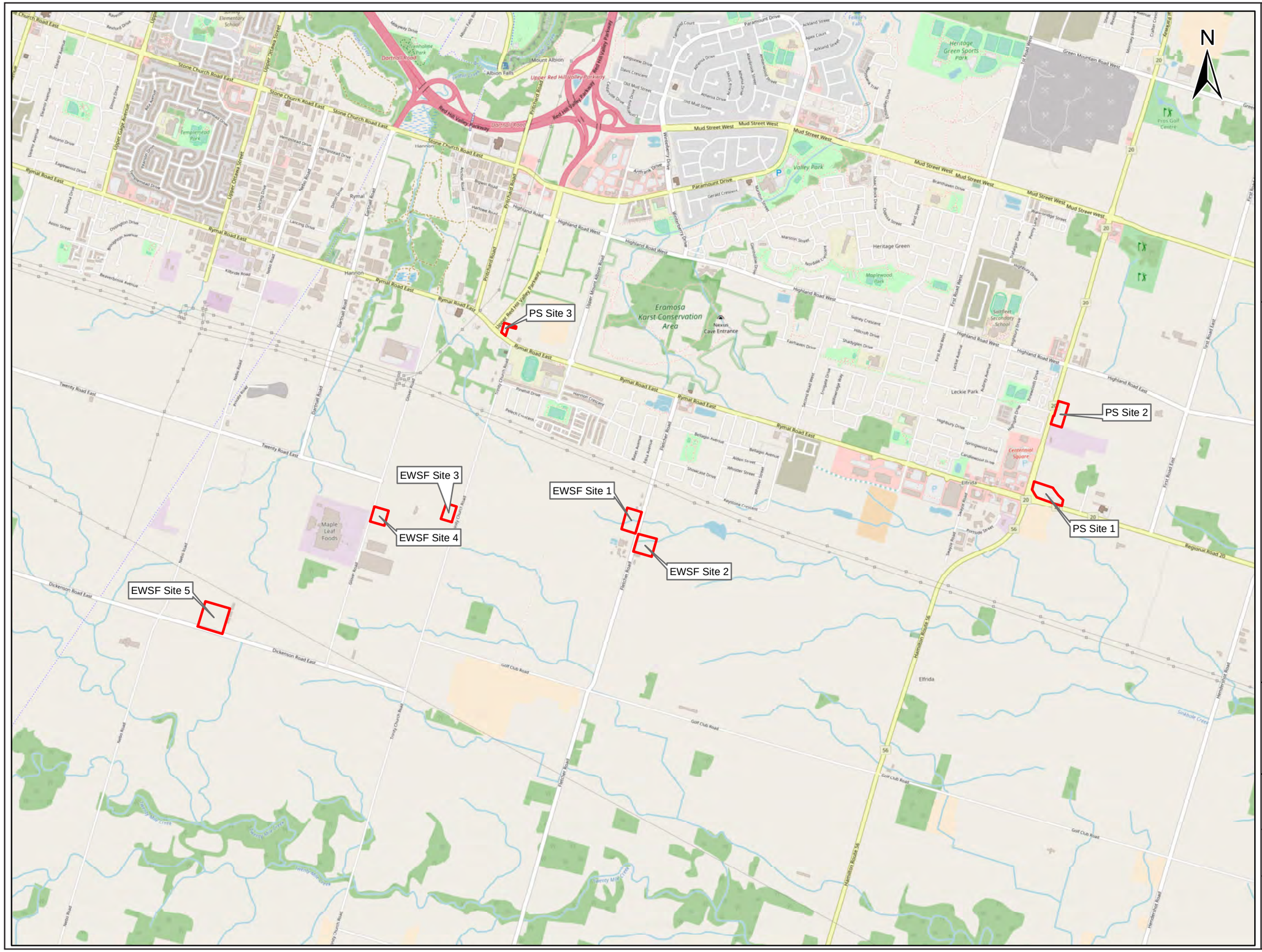
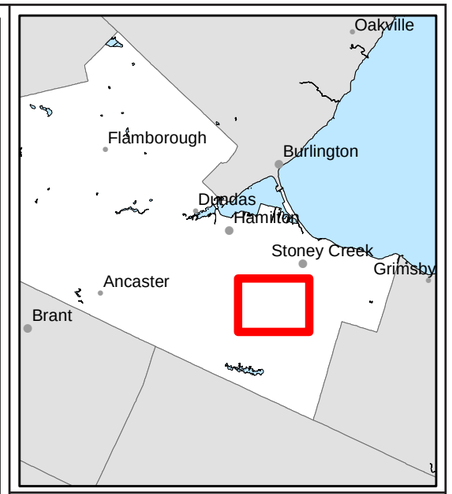
7.0 MAPS





Study Areas

BASE:
Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

0 1.25
Kilometers

ASI PROJECT NO.: 16EA-165
DATE: 5/2/2018

DRAWN BY: AB?JF
FILE: 16EA164_Fig1

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Figure 1: Hamilton Elevated Water Storage Facility and Pumping Station - Location of the Study Area

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Study Areas

Base:
1791 Patent Plans
Saltfleet, Wentworth & Binbrook

0 1
Kilometres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17

DRAWN BY: AB
FILE: 16EA265_Hist

Figure 2: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the Patent Plans for the Townships of Saltfleet, Glanford and Binbrook

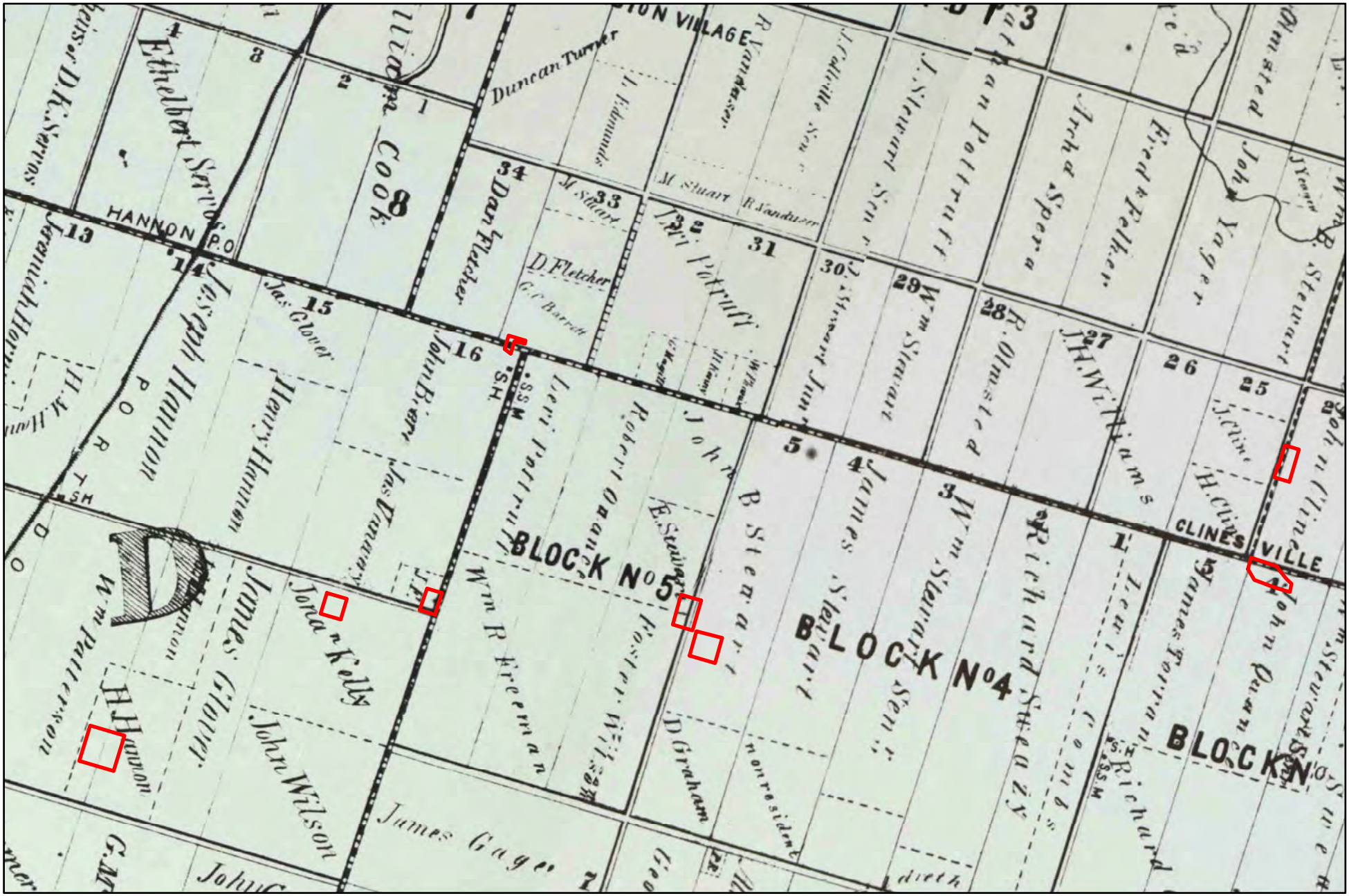
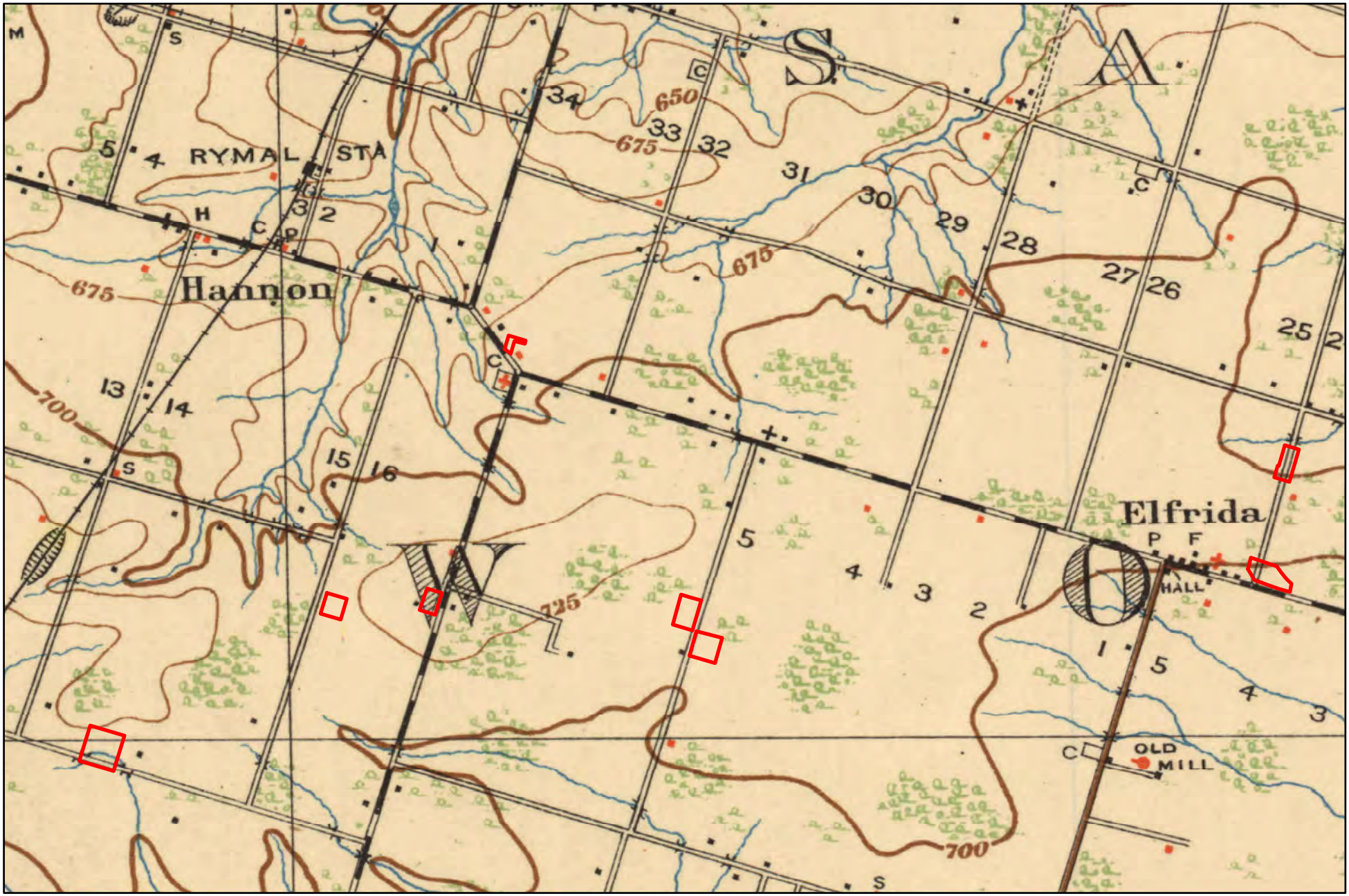


Figure 3: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the 1859 Map of the County of Wentworth

Archaeological & Cultural Heritage Services 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 | F416-966-9723 | asiheritage.ca	Study Areas	Base: 1875 Illustrated Historic Atlas Saltfleet, Glanford, Binbrook & Barton Sheets	0 1 Kilometres ASI PROJECT NO.: 16EA-265 DRAWN BY: AB DATE: 2018-05-17 FILE: 16EA265_Hist

Figure 4: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the 1875 Illustrated Atlas of the County of Wentworth



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Study Areas

Base:
1907 NTS Map
Grimsby Sheet

0 1
Kilometres

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Figure 5: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the 1907 National Topographic System Grimsby Sheet

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Study Areas

Base:
1965 Aerial Photography

0 1
Kilometres

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DATE: 2018-05-17

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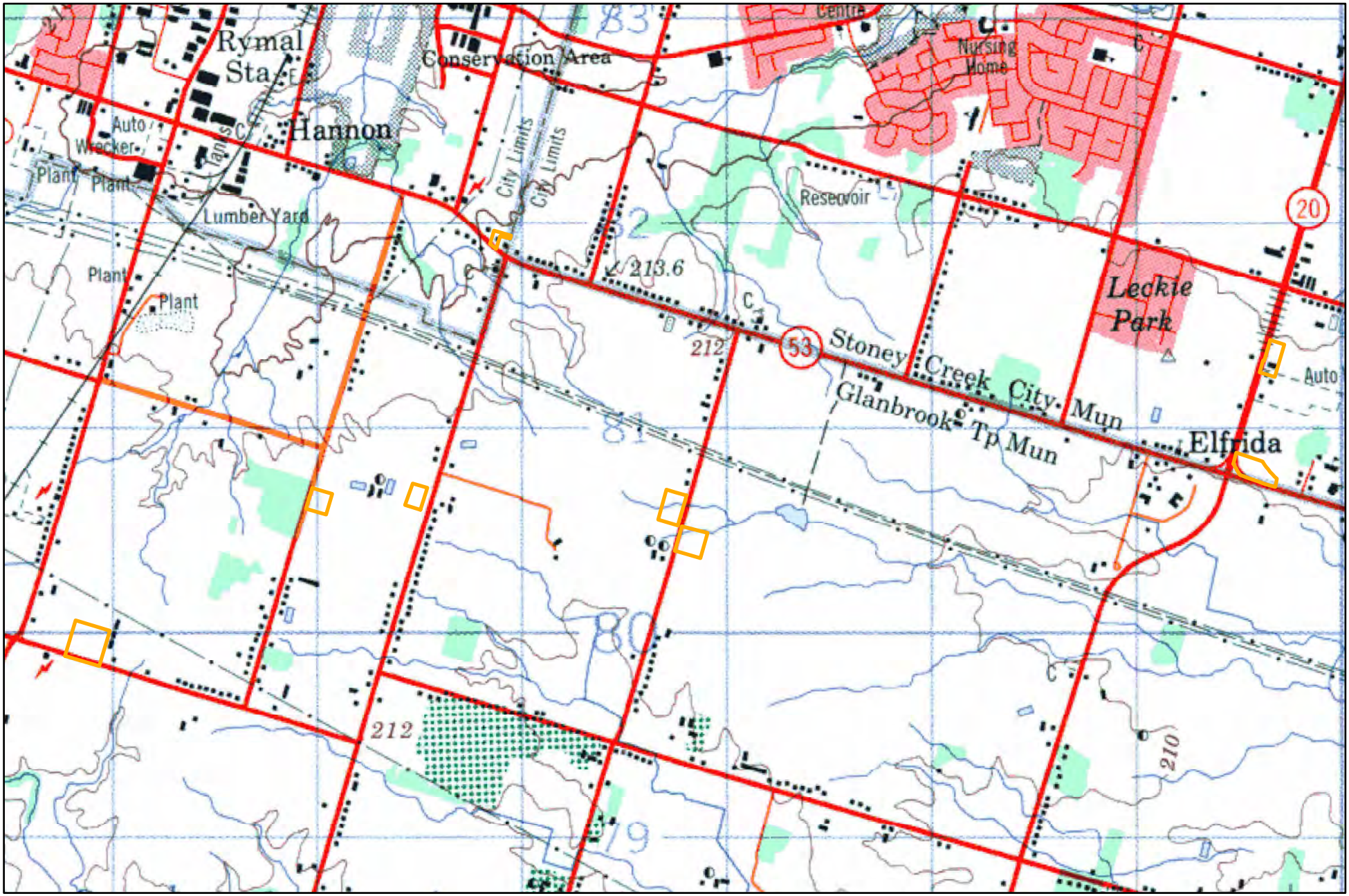
FILE: 16EA265_Hist

Figure 6: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the 1965 Aerial Photography of the City of Hamilton



Study Areas

Base:
1994 NTS Map
Hamilton-Grimsby Sheet

0 1
Kilometres

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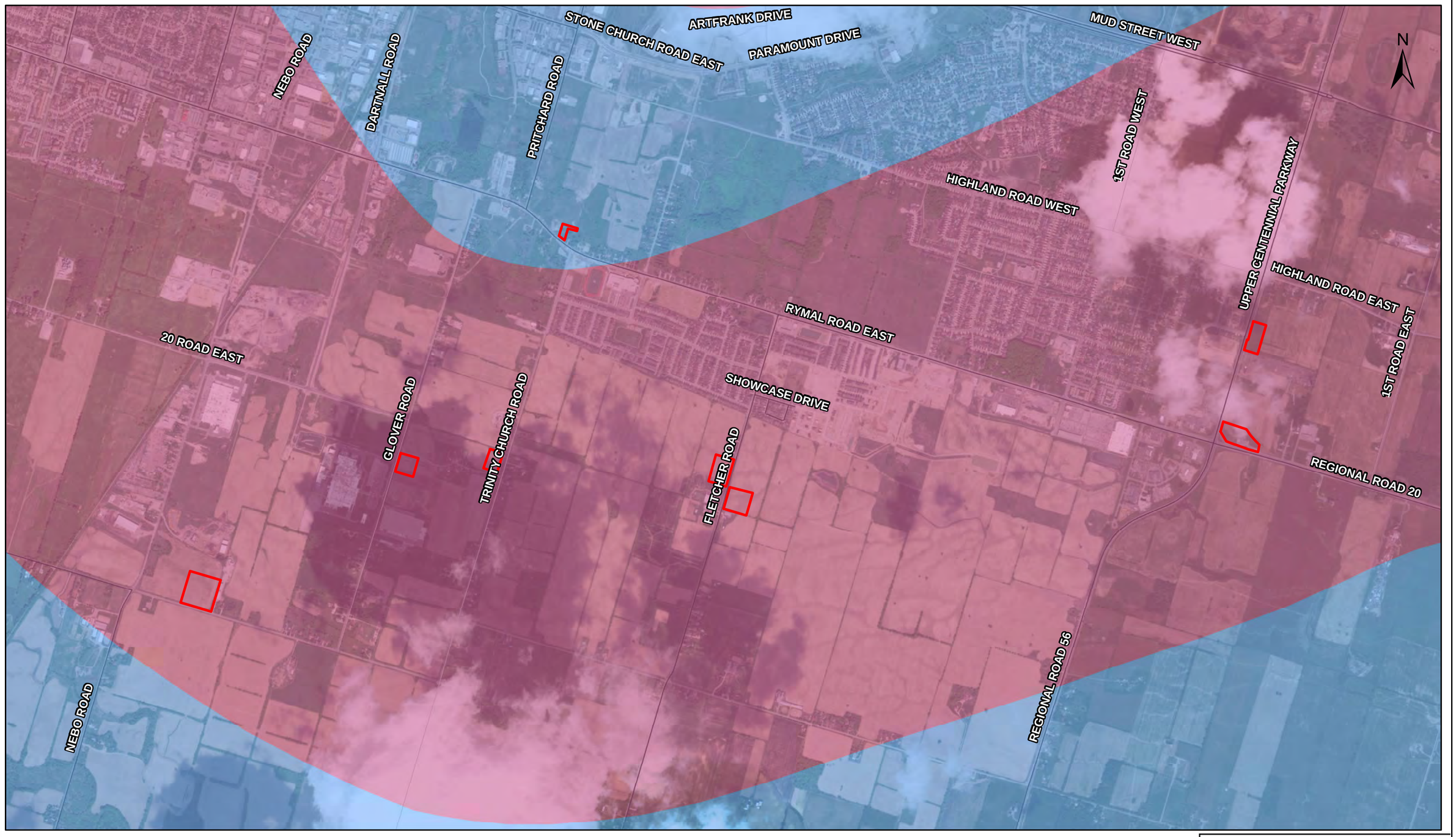
Figure 7: Hamilton Elevated Storage Facility and Pumping Station Study Area (Approximate Location) Overlaid on the 1996 National Topographic System Hamilton-Grimsby Sheet



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Date: 5/7/2018

Drawn By: JF
File: 16EA265_fig8_geo

Figure 8: Hamilton Elevated Water Storage Facility and Pumping Station Study Area - Physiographic Landforms

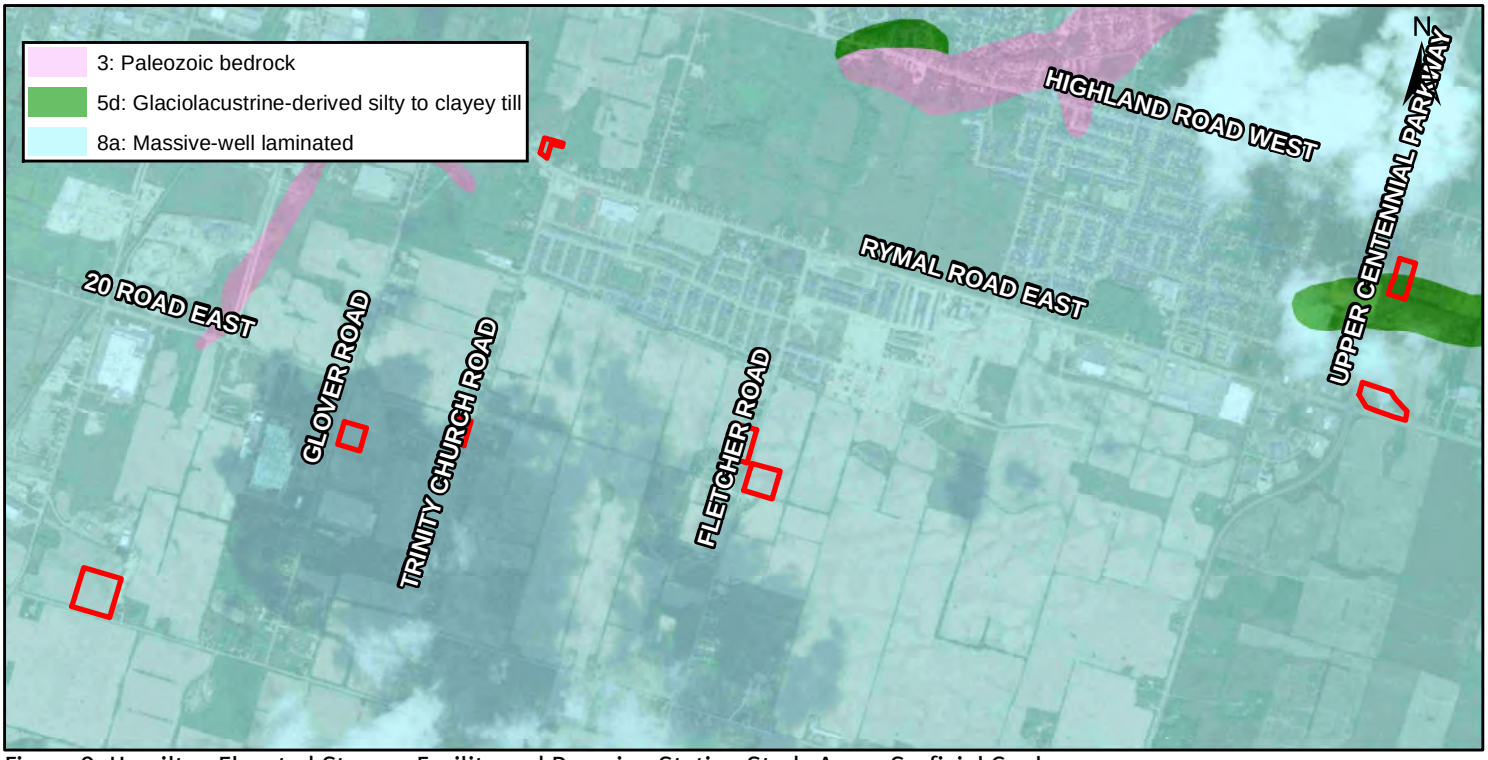

Figure 9: Hamilton Elevated Storage Facility and Pumping Station Study Area - Surficial Geology

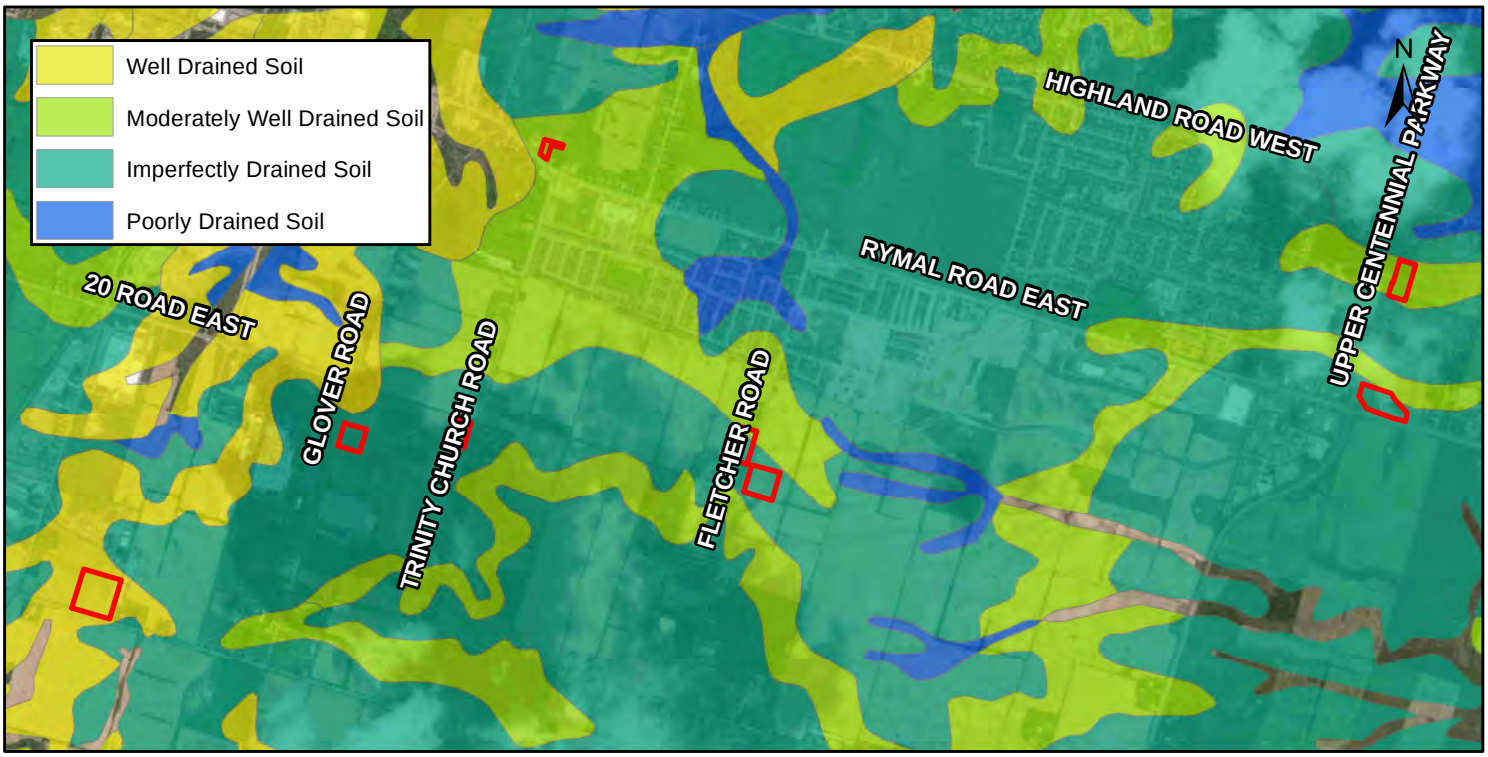

Figure 10: Hamilton Elevated Storage Facility and Pumping Station Study Area - Soil Drainage

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Study Areas

Base:
Dataset produced by the Ontario Geological Survey, Ministry of Northern Development and Mines, © Queen's Printer for Ontario, 2003.

0 1
Kilometres

ASI PROJECT NO.: 16EA-265
DATE: 5/7/2018
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STUDY AREAS
DISTURBED - NO POTENTIAL
POTENTIAL - TEST PIT SURVEY REQUIRED
PROPERTY PARCELS
PHOTO LOCATIONS

BASE: Google Imagery, 2018

0 45
Metres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17
DRAWN BY:AB
FILE:16EA265_stage1

Figure 11: Hamilton Elevated Water Storage Facility and Pumping Station - Results of the Property Inspection (PS Site 1)

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STUDY AREAS
POTENTIAL - PEDESTRIAN SURVEY
PROPERTY PARCELS
PHOTO LOCATIONS

BASE: Google Imagery, 2018

0 40
Metres

ASI PROJECT NO.: 16EA-265
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FILE:16EA265_stage1

Figure 12: Hamilton Elevated Water Storage Facility and Pumping Station - Results of the Property Inspection (PS Site 2)

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STUDY AREAS
POTENTIAL - PEDESTRIAN SURVEY
LOW/WET - NO POTENTIAL
PROPERTY PARCELS
PHOTO LOCATIONS

BASE: Google Imagery, 2018

0 50
Metres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17
DRAWN BY:AB
FILE:16EA265_stage1

Figure 14: Hamilton Elevated Water Storage Facility and Pumping Station - Results of the Property Inspection (EWSF Sites 1 and 2)

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STUDY AREAS
PROPERTY PARCELS
PREVIOUSLY ASSESSED (NDA, 2009)

BASE: Google Imagery, 2018

0 50
Metres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17
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FILE:16EA265_stage1

Figure 15: Hamilton Elevated Water Storage Facility and Pumping Station - Results of the Property Inspection (EWSF Sites 3 and 4)

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STUDY AREAS
POTENTIAL - PEDESTRIAN SURVEY
POTENTIAL - TEST PIT SURVEY REQUIRED
LOW/WET - NO POTENTIAL
PROPERTY PARCELS
PHOTO LOCATIONS

BASE: Google Imagery, 2018

0 50
Metres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17
DRAWN BY:AB
FILE:16EA265_stage1

Figure 16: Hamilton Elevated Water Storage Facility and Pumping Station - Results of the Property Inspection (EWSF Site 5)

8.0 IMAGES

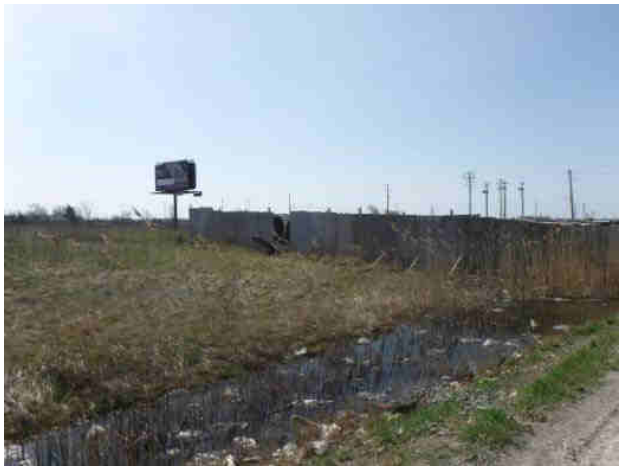

Plate 1: Southeast view of PS Site 1; Area between former road and current construction exhibits potential, requires Stage 2 test pit survey

Plate 2: South view of PS Site 1; Area between former road and current construction exhibits potential, requires Stage 2 test pit survey

Plate 3: South view of PS Site 2; Area in fallow field, requires Stage 2 pedestrian survey

Plate 4: Southeast view of PS Site 2; Area in fallow field exhibits potential, requires Stage 2 pedestrian survey

Plate 5: West view of EWSF Site 1; Area exhibits potential, requires Stage 2 pedestrian survey

Plate 6: Southwest view of EWSF Site 1; Area exhibits potential, requires Stage 2 pedestrian survey

Plate 7: Norhteast view towards EWSF Site 2; Area exhibits potential, requires Stage 2 pedestrian survey

Plate 8: East view towards EWSF Site 2; Area exhibits potential, requires Stage 2 pedestrian survey

Plate 9: North view towards EWSF Site 5; Area exhibits potential, requires Stage 2 pedestrian survey

Plate 10: Northwest view of EWSF Site 5; Area exhibits potential, requires Stage 2 test pit and pedestrian survey

Stage 1 Archaeological Assessment
Hamilton Elevated Water Storage Facility and Pumping Station
Part of Lots 24 & 34, Concession 8,
Lots 14 & 16, Concession 2,
Block 5 Lot 7 & Block 4 Lot 5, Concession 1
(Former Township of Saltfleet, Glanford and Binbrook)
County of Wentworth
City of Hamilton, Ontario

SUPPLEMENTARY DOCUMENTATION

Prepared for:

Cole Engineering Group Ltd.
195 King Street, Unit 205
St. Catharines, ON L2R 3J6

Archaeological Licence #P1066 (Lytle)
Ministry of Tourism, Culture and Sport PIF# P1066-0074-2018
ASI File: 16EA-264

25 May 2018

ASI
Providing Archaeological & Cultural Heritage Services
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1.0 MAPS

According to Section 7.6 of the *Standards and Guidelines for Consultant Archaeologists* (S & G) administered by the Ministry of Tourism, Culture and Sport (MTCS 2011), any information that pinpoints the location of an archaeological site (e.g., detailed assessment results mapping, tables of Global Positioning System (GPS) coordinates for site locations) must not be included in the project report and should only be provided in the Supplementary Documentation. This allows the MTCS to exclude it from the Ontario Public Register of Archaeological Reports, if necessary. Archaeological site location information is considered by the MTCS to be confidential and/or sensitive information that cannot be made public.

The following map shows the approximate location AhGw-271 within 50 metres of EWSF Site 4. Site descriptions and other relevant information relating to all archaeological work conducted for the project are contained in our accompanying Stage 1 assessment report (ASI 2018).

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STUDY AREAS
PREVIOUSLY ASSESSED (NDA, 2009)
PROPERTY PARCELS
CHVI BUFFER - 10m
No Further CHVI
Further CHVI

BASE: Google Imagery, 2018

0 50
Metres

ASI PROJECT NO.: 16EA-265
DATE: 2018-05-17
DRAWN BY:AB
FILE:16EA265_stage1

Figure 1: Hamilton Elevated Water Storage Facility and Pumping Station EWSF Sites 3 and 4 - Previously Registered Archaeological Sites

2.0 DETAILED SITE LOCATION

2.1 AhGw-271

AhGw-271 was previously identified during Stage 2 pedestrian survey of the property at 420 Trinity Church Road, within the current Study Area. According to the OASD, AhGw-271 is located approximately 40m south of EWSF Site 4. The site consisted of a single Onondaga projectile point, missing the top and part of the base, resembling an Early Archaic Nettling point. It was not recommended for Stage 3 assessment in the original report (New Directions Archaeology Ltd. 2009), however, in accordance with the current S & G Section 2.2, Standard 1b, isolated Early Archaic artifacts are considered to exhibit cultural heritage value or interest (CHVI), therefore AhGw-271 should be subject to Stage 3 archaeological assessment.

Table 1: AhGw-271 Detailed Location Information

Project:	NDA 2009		
MTCS PIF:	P018-273-2009		
Source:	OASD		
UTM Grid Zone:	NAD83		
Site	**UTM Co-ordinates**	**Error (I *x* m)**	**Site Datum (Grid Co-ordinate) and/or Location information**
AhGw-271	595026, 4780559	unknown	Findspot

3.0 REFERENCES CITED

ASI (Archaeological Services Inc.)
2018 Stage 1 Archaeological Assessment Hamilton Elevated Water Storage Facility and Pumping Station Part of Lots 24 & 34, Concession 8, Lots 14 & 16, Concession 2, Block 5 Lot 7 & Block 4 Lot 5, Concession 1 (Former Township of Saltfleet, Glanford and Binbrook) County of Wentworth City of Hamilton, Ontario.

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

New Directions Archaeology Ltd.
2009 Stage 1-2 Archaeological Assessment of the 420 Trinity Church Road Property, Township of Glanbrook, City of Hamilton.