

Stage 1 Archaeological Assessment North Halton Coordinated Municipal Class Environmental Assessment – Regional Road 25 (Lots 5-10, Concessions 2 and 3, Geographical Esquesing Township, County of Halton), Town of Halton Hills, Halton Region

Original Report

Prepared for:

HDR

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PIF P1066-0339-2023
Archaeological Services Inc. File: 22EA-244

April 29, 2024



Executive Summary

Archaeological Services Inc. was retained by HDR, on behalf of the Halton Region, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the North Halton Coordinated Municipal Class Environmental Assessment study. This project involves the review of potential improvements to Regional Road 25 from 5 Side Road to 10 Side Road in the Town of Halton Hills.

The Stage 1 Study Area consists of a 50-metre-wide corridor along Regional Road 25 from 5 Side Road to 10 Side Road in the Town of Halton Hills and will encompass the potential improvements.

Background research determined 11 previously registered archaeological sites are located within one kilometre of the Study Area and that part of the Study Area has been previously assessed. The one site within 50 metres has been noted to not have further cultural heritage value or interest. The property inspection determined that parts of the Study Area exhibit archaeological potential.

The following recommendations are made:

- 1) Parts of the Study Area exhibit archaeological potential. If impacted, these lands require Stage 2 archaeological assessment by test pit at five metre intervals, prior to any construction activities;
- 2) The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance, low and wet conditions, slopes in excess of 20 degrees, or being previously assessed (P057-576-2009, P057-145, P0-13-67). These lands do not require further archaeological assessment; and,
- 3) Should the potential work extend beyond the current Study Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.



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Table of Contents

Executive Summary	2
Project Personnel	3
Table of Contents	4
1.0 Project Context	8
1.1 Development Context	8
1.1.1 Treaties	9
1.2 Historical Context	9
1.2.1 Indigenous Land Use and Settlement	9
1.2.2 Post-Contact Settlement	11
1.2.3 Map Review	13
1.2.4 Aerial and Orthoimagery Review	14
1.3 Archaeological Context	14
1.3.1 Geography	14
1.3.2 Previously Registered Archaeological Sites	16
1.3.3 Previous Archaeological Assessments	18
2.0 Property Inspection	19
2.1 Field Methods	19
2.2 Current Land Use and Field Conditions	20
3.0 Analysis of Archaeological Potential	21
3.1 Conclusions	23
4.0 Recommendations	23
5.0 Legislation Compliance Advice	24
6.0 Bibliography and Sources	25
7.0 Images	30
7.1 Field Photography	30
7.2 Historical Imagery	45



8.0 Maps	48
----------	----

List of Tables

Table 1: Registered Sites within One Kilometre of the Study Area	17
--	----

List of Images

Image 1: Sloped beyond disturbed right-of-way, no archaeological potential.	30
Image 2: Sloped beyond disturbed right-of-way, no archaeological potential.	30
Image 3: Sloped beyond disturbed right-of-way, no archaeological potential.	31
Image 4: Sloped beyond disturbed right-of-way, no archaeological potential.	31
Image 5: Archaeological potential beyond disturbed road right-of-way, test pit survey required.	32
Image 6: Archaeological potential beyond ditch, test pit survey required.	32
Image 7: Sloped beyond disturbed right-of-way, no archaeological potential.	33
Image 8: Low and wet beyond disturbed road right-of-way, no archaeological potential.	33
Image 9: Low and wet beyond disturbed road right-of-way, no archaeological potential.	34
Image 10: Disturbed by drainage ditching and berm construction, no archaeological potential.	34
Image 11: Disturbed lawn beyond road right-of-way, no archaeological potential.	35
Image 12: Low and wet in foreground beyond disturbed road right-of-way, no archaeological potential. Woods beyond require test pit survey.	35
Image 13: Low and wet beyond disturbed road right-of-way, no archaeological potential.	36
Image 14: Channelized Sixteen Mile Creek tributary, disturbed within the road right-of-way, no archaeological potential.	36
Image 15: Tributary channelized under the road, lands beyond disturbed road right-of-way require test pit survey.	37
Image 16: Archaeological potential beyond disturbed road right-of-way, test pit survey required.	37
Image 17: Disturbed beyond road right-of-way, no archaeological potential.	38
Image 18: Disturbed beyond road right-of-way, no archaeological potential.	38



Image 19: Archaeological potential beyond disturbed road right-of-way, test pit survey required.	39
Image 20: Archaeological potential beyond disturbed road right-of-way, test pit survey required.	39
Image 21: Disturbed beyond road right-of-way, no archaeological potential.	40
Image 22: Disturbed beyond road right-of-way, no archaeological potential.	40
Image 23: Archaeological potential beyond roadbed, test pit survey required.	41
Image 24: Archaeological potential beyond roadbed, test pit survey required.	41
Image 25: Disturbed industrial land and road right-of-way, no archaeological potential.	42
Image 26: Archaeological potential beyond roadbed, test pit survey required.	42
Image 27: Disturbed industrial land and road right-of-way, no archaeological potential.	43
Image 28: Low and wet, no archaeological potential.	43
Image 29: Archaeological potential on lawn, test pit survey required.	44
Image 30: Disturbed industrial land and road right-of-way, no archaeological potential.	44
Image 31: Google Earth imagery of the 5 Side Road and Regional Road 25 intersection in 2013 after the road was widened and additional lanes were added.	45
Image 32: Google Earth imagery of land altering development in 2015 northeast of the 5 Side Road.	45
Image 33: Google Earth imagery from 2019 after land altering development northeast of the 5 Side Road and Regional Road 25 intersection.	46
Image 34: Google Earth imagery from 2005 showing ditches in Study Area.	46
Image 35: Google Earth imagery from 2009 showing heavily altered landscape and berm at 9700 Regional Road 25.	47

List of Figures (Available Upon Request)

Figure 1: Regional Road 25 North Halton Coordinated MCEA Study Area

Figure 2: Study Area (Approximate Location) Overlaid on the 1858 Tremaine's Map of Halton County



Figure 3: Study Area (Approximate Location) Overlaid on the 1877 Illustrated Historical Atlas of Halton County

Figure 4: Study Area (Approximate Location) Overlaid on the 1909 Topographic Map Brampton Sheet

Figure 5: Study Area (Approximate Location) Overlaid on the 1994 National Topographic Series Brampton Sheet

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

Figure 7: Study Area – Surficial Geology

Figure 8: Study Area – Soil Drainage

Figure 9: Regional Road 25 North Halton Coordinated MCEA – Stage 1 Results Key Sheet

Figure 10: Regional Road 25 North Halton Coordinated MCEA – Stage 1 Results Sheet 1

Figure 11: Regional Road 25 North Halton Coordinated MCEA – Stage 1 Results Sheet 2

Figure 12: Regional Road 25 North Halton Coordinated MCEA – Stage 1 Results Sheet 3

Figure 13: Regional Road 25 North Halton Coordinated MCEA – Stage 1 Results Sheet 4



1.0 Project Context

Archaeological Services Inc. (ASI) was retained by HDR, on behalf of Halton Region, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the North Halton Coordinated Municipal Class Environmental Assessment (MCEA) study. This project involves the review of potential improvements to Regional Road 25 from 5 Side Road to 10 Side Road in the Town of Halton Hills.

These improvements may include:

- Four (4) lanes of through capacity;
- Paved shoulders;
- Transit Priority Corridor – Mixed Traffic (as identified in the Defining Major Transit Requirements (DMTR) in Halton 2031 and 2041 Transit Priority Corridor Networks); and
- Development of vertical and horizontal alignments, including new or modified structures (where required).

The Stage 1 Study Area consists of a 50-metre-wide corridor along Regional Road 25 from 5 Side Road to 10 Side Road in the Town of Halton Hills (Figure 1) and will encompass the potential improvements.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2023) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Citizenship and Multiculturalism (MCM 2011).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (Environmental Assessment Act, R.S.O. c. E.18, 1990 as amended 2022) and regulations made under the Act, and are therefore subject to all associated legislation.



This project is being conducted in accordance with the *Municipal Class Environmental Assessment* process (Municipal Engineers Association, 2023).

The *Master Plan of Archaeological Resources of the Regional Municipality of Halton 2008 Update* (ASI, 2009) was also consulted.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment and site visit from the existing right-of-way was granted by HDR on March 21, 2023.

1.1.1 Treaties

The Study Area is within Treaty 13a, signed on August 2, 1805, by the Mississaugas and the British Crown in Port Credit at the Government Inn. A provisional agreement was reached with the Crown on August 2, 1805, in which the Mississaugas ceded 70,784 acres of land bounded by the Toronto Purchase of 1787 in the east, the Brant Tract in the west, and a northern boundary that ran six miles back from the shoreline of Lake Ontario. The Mississaugas also reserved the sole right of fishing at the Credit River and were to retain a one-mile strip of land on each of its banks, which became the Credit Indian Reserve. On September 5, 1806, the signing of Treaty 14 confirmed the Head of the Lake Purchase between the Mississaugas of the Credit and the Crown (Mississauga of the New Credit First Nation, 2001; Mississaugas of the Credit First Nation, 2017).

The Study Area is within the Area of Interest for archaeology of the Huron-Wendat Nation.

1.2 Historical Context

1.2.1 Indigenous Land Use and Settlement

Current archaeological evidence indicates humans were present in southern Ontario approximately 13,000 years before present (B.P.) (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 B.P., the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).



Between approximately 10,000-5,500 B.P., 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 B.P.; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest archaeological evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is interpreted by archaeologists to be indicative of increased social organization and the investment of labour into social infrastructure (J. Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. 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 B.P. – 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 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), larger settlement sites focused on horticulture begin to dominate the archaeological record. Seasonal



dispersal 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 C.E., archaeological research focusing on these horticultural societies note that this episodic community dispersal was no longer practised and these populations now 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 these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

By 1600 C.E., the Confederation of Nations were encountered by the first European explorers and missionaries in Simcoe County. 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. By the 1640s, devastating epidemics and the traditional enmity between the Haudenosaunee and the Attawandaron and the Huron-Wendat (and their Algonquian allies such as the Nipissing and Odawa) led to their dispersal from southern Ontario. The Huron-Wendat eventually resettled in what is known today as Wendake, Quebec. 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 Esquesing Township, County of Halton, in Lots 5 to 10 of Concession 2 and 3.



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).

1.2.2.1. Township of Esquesing

The first Esquesing Township survey was undertaken in 1819, and the first legal settlers occupied their land holdings in the same year. Esquesing Township is said to have been named from the corruption of a Mississauga word, *eshkwessing*, signifying “the last in a row” which referred to the Sixteen Mile Creek. Esquesing was initially settled by the children of Loyalists, soldiers who served during the War of 1812, and by immigrants from England, Scotland and Ireland. By the 1840s, the township was noted for its good farms and excellent



land which produced a superior quality of wheat (Armstrong 1985:143; Rayburn 1997:114; Smith 1846:56).

1.2.3 Map Review

The 1858 *Tremaine's Map of Halton County* (Tremaine, 1858) and the 1877 *Illustrated Historical Atlas of Halton County* (Pope, 1877), 1909 topographic map Brampton Sheet (Department of Militia and Defence, 1909), and the 1994 National Topographic Series Brampton Sheet (Department of Energy, Mines and Resources, 1994) were examined to determine the presence of historic features within the Study Area during the nineteenth and twentieth centuries (Figure 2 to Figure 5).

The 1858 map (Figure 2) shows Regional Road 25 from 5 Side Road and 10 Side Road as historically surveyed road allowances. The “East Branch of Sixteen Mile Creek” is shown passing through the Study Area. A blacksmith shop is shown at the southwest corner of the Study Area. No other structures are indicated immediately adjacent to the Study Area. The 1858 and 1877 map (Figure 3) show a jagged, non-linear intersection where Regional Road 25 connects with 10 Side Road at the north end of the Study Area following the base of the Niagara Escarpment. The 1877 map shows farmsteads and homesteads fronting onto Regional Road 25. The Duncan C Robertson Mill is illustrated west of the Study Area in Lot 8 of Concession 2. Another mill, labelled S. Care’s mill, is located east of the Study Area in Lot 7 of Concession 3. The Hamilton & North-Western Railroad is located north of the Study Area

The 1909 map (Figure 4) continues to show homes fronting Regional Road 25. The aforementioned mills are not shown. Two wooden bridges and one metal bridge are indicated. The topographic map indicates sloped sections within the northern part of the Study Area.

The 1994 map (Figure 5) shows the Scotch Block dam to the northeast of the Study Area and a Steel Mill southeast. Additional homes are indicated as being constructed along Regional Road 25.



1.2.4 Aerial and Orthoimagery Review

Historical aerial imagery from 1954 (Hunting Survey Corporation Limited, 1954) shows the Study Area surrounded by agricultural fields and the meandering Middle Sixteen Mile Creek passing through it (Figure 6).

A review of available Google satellite imagery shows:

- By 2013, the 5 Side Road and Regional Road 25 intersection was improved, and additional lanes were added (Image 31).
- In 2015, topsoil stripping and grading was seen northeast of the 5 Side Road and at the Regional Road 25 intersection, and by 2019, the entirety of this corner had been modified (Image 32 and Image 33).
- Image 34 and Image 35 show ditches within the Study and a berm at 9700 Regional Road 25 (Figure 11)

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 MCM through “Ontario’s Past Portal”; published and unpublished documentary sources; and the files of ASI.

1.3.1 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 B.P. (Karrow & Warner, 1990, fig. 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 till plains physiographic landforms of the South Slope physiographic region of southern Ontario (Chapman & Putnam, 1984). The South Slope physiographic region (Chapman & Putnam, 1984, pp. 172–174) is the southern slope of the Oak Ridges Moraine. The South Slope meets the Moraine at heights of approximately 300 metres above sea level, and descends southward toward Lake Ontario, ending, in some areas, at elevations below 150 metres above sea level. Numerous streams descend the South Slope, having cut deep valleys in the till.



Figure 7 depicts surficial geology for the Study Area, which demonstrates that the Study Area is underlain by ice-contact stratified deposits of sand and gravel, minor silt, clay and till; clay to silt-textured till (derived from glaciolacustrine deposits or shale); organic deposits of peat, muck and marl; and modern alluvial deposits of clay, silt, sand, gravel and organic remains (Ontario Geological Survey, 2010).

Soil in the Study Area consists of:

- Grandby; a sandy loam with poor drainage
- Grimbsy; a sandy loam with good drainage
- Oneida; a silt loam with good drainage
- Jeddo a clay loam with poor drainage

Soil drainage for the Study Area is shown in Figure 8.

Middle Sixteen Mile Creek intersects the Study Area. The Sixteen Mile Creek watershed is about 360 square kilometres that includes both rural and urban land uses. The creek drains parts of Halton Hills, Milton, Mississauga, and Oakville where it flows into Lake Ontario. There are three water control reservoirs used to manage floods and low flows within the Sixteen Mile Creek watershed (*Watersheds: Sixteen Mile Creek*, n.d.).

1.3.2 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MCM. 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 AjGx.

According to the Ontario Archaeological Sites Database, 11 previously registered archaeological sites are located within one kilometre of the Study Area, one of



which (AjGx-148) is located within 50 metres (MCM 2023). A summary of the sites is provided below in Table 1. The site within 50 metres of the Study Area is bolded.

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

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-73	Duff Estates #2	Indigenous	Scatter	Dana Poulton 1994
AjGx-72	Duff Estates #1	Indigenous	Findspot	Dana Poulton 1994
AjGx-38				R. O'Brien 1998
AjGx-29	Chudleigh 2			Unknown 1998
AjGx-28	Chudleigh 1			This Land Archaeology Inc. 1985
AjGx-26	Glengate Farms			Unknown 1998
AjGx-23	Dupras			Unknown 1998
AjGx-17	Irving			Unknown 1998
AjGx-151	Bestpipe	Indigenous	Campsite	Archaeological Assessments Ltd 2004



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-150	John White	Post-Contact	Homestead	Archaeological Assessments Ltd 2004
AjGx-148	Cooper	Indigenous	Campsite	Archaeological Assessments Ltd 2005

1.3.3 Previous Archaeological Assessments

ASI reviewed previous archaeological assessments that detail fieldwork within 50 metres of the Study Area. Only those specific archaeological assessments of direct relevance to the present undertaking other will be included here:

1.3.3.1. Reports within the Study Area

(Sutton, 2004) Archaeological Assessments Ltd. 2004. "The Stage 1-3 Archaeological Assessment of the Milton 401 Business Park, Draft Plan 24T-03005/M, Part of Lot 5, Concession 3, Township of Esquesing, Regional Municipality of Halton (P013-067)

This project area overlaps with the southeast corner of the current Study Area. In 2004, Archaeological Assessments Ltd. conducted a Stage 1-3 archaeological assessment of the Milton 401 Business Park. One archaeological site, the Cooper site (AjGx-148), was located during Stage 2 pedestrian survey of the ploughed field. It was identified as a small indeterminate Indigenous campsite. A Stage 3 controlled surface collection and test excavations were carried out on this site in May 2004. In total, nine artifacts were recovered, six flake fragments, two pieces of shatter and one utilized flake. Given the results of the Stage 1-3 archaeological assessment, it was recommended that the entire project area is cleared of any further archaeological concern.



(ASI, 2009) Stage 2 Archaeological Assessment Regional Road 25 Transportation Corridor Class Environmental Assessment (P057-576-2009)

This project area overlaps with the southwest and southeast corners of the Study Area, south of 5 Side Road and along Regional Road 25. The 2009 Stage 2 archaeological assessment consisted of systematic test pit survey at five metre intervals which focused on 20 meters on both sides of Regional Road 25 and along intersecting roadways. The existing right-of-way, which includes the paved roadway, gravel shoulder and ditch, was deemed to be disturbed by previous road improvements and installation of utilities. The entire Stage 2 corridor within the project area has been cleared and no further archaeological assessment are required.

1.3.3.2. Additional Reports within 50 metres of the Study Area

(Poulton, 1994) An Archaeological Assessment of the Duff House Estates Property, Draft Plan 24T-89040, Lot 9, Concession 2, Town of Halton Hills, Halton R. M., Ontario (94-21B)

The 1994 project area for the Duff House Estate Property archaeological assessment is located adjacent to the west side of the current Study Area. Duff Estates #1 (AjGx-72) and Duff Estates #2 (AjGx-73) were discovered during pedestrian survey of ploughed fields at five metre intervals which were then intensified to one metre intervals. AjGx-72 consisted of one Onondaga flake. AjGx-73 consisted of two pieces of lithic debitage. Both sites were determined to have no further cultural heritage value or interest, and no further archaeological assessments were recommended.

2.0 Property Inspection

2.1 Field Methods

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 Jessica Lytle (P1066) of ASI, on April 26, 2023, 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 spot checking visual inspection from public right-of-ways only and did not include excavation or collection of archaeological resources. Fieldwork was conducted when weather conditions were deemed clear with good visibility (sunny with seasonal temperatures), per S & G Section 1.2., Standard 2. Field photography is presented in Section 7.1 (Image 1 to Image 30), and field observations are overlaid onto the existing conditions of the Study Area in Section 8.0 (Figure 10 to Figure 13).

2.2 Current Land Use and Field Conditions

Regional Road 25 is a two-way road with single lanes of opposing traffic and intermittent turning lanes. The right-of-way includes the roadbed, wide paved and gravel shoulders, ditches, and hydro poles. Undulating topography has led to sections of Regional Road 25 which have either built-up embankments or have cut slopes. Some residential properties have culverts under the driveways for drainage in the right-of-way ditching. Hydro poles line both the north and south sides of the road. Middle Sixteen Mile Creek traverses through the middle of the Study Area passing under Regional Road 25 through a large concrete



culvert and surrounded by swampy areas on both sides of the road. A golf course, a vineyard, agricultural fields, and an industrial area are also adjacent to the Regional Road 25 Study Area.

3.0 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);
- Water sources: primary, secondary, or past water source (Middle Sixteen Mile Creek);
- Well-drained soils (Oneida, Grimbsy);
- Early historic transportation routes (Regional Road 25, 5 Side Road and 10 Side Road)

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 Halton Hills Heritage Register Map (Town of Halton Hills, 2019) was consulted and two properties within the Study Area are Listed or Designated under the *Ontario Heritage Act*:

- 9920 Regional Road 25, Towercliffe House, Listed, 1896
- 9690 Regional Road 25, Duff House, Designated, 1870s

The *Master Plan of Archaeological Resources of the Regional Municipality of Halton 2008 Update* (ASI, 2009) was reviewed for background information and to help inform any indicators of archaeological potential not captured in other research. Generally speaking, archaeological management plans are high-level analyses of archaeological potential for non-specialists but cannot be considered a replacement for Stage 1 archaeological assessments. ASI's review of the above archaeological master plan indicates part of the Study Area has archaeological potential.



The property inspection determined that parts of the Study Area exhibit archaeological potential. This includes the heritage properties at 9920 and 9690 Regional Road 25 (Figure 10). If impacted, these areas will require Stage 2 archaeological assessment, prior to any construction activities. 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 (Images 5-7, 16, 19, 20, 23, 24, 26, 29 ; Figure 10 to Figure 13: areas highlighted in green).

Part of the Study Area has been previously assessed (P057-145, P057-576-2009, P0-13-67) and does not require further archaeological assessments (Figure 13: areas highlighted in dark orange).

A combination of property inspection and assessment of topographic mapping (ESRI 2022) determined that some of lands within the Study Area are sloped in excess of 20 degrees and according to the S & G Section 2.1 do not retain potential (Images 1-4; Figure 10: areas highlighted in pink). These areas do not require further survey.

A combination of property inspection, assessment of topographic mapping (ESRI 2022), and surficial geology data determined that parts of the Study Area are located within permanently low lying wet areas and according to the S & G Section 2.1 do not retain potential (Images 8, 9, 12, 13, 28; Figure 10, Figure 11, and Figure 13: areas highlighted in blue). These areas do not require further survey.

Part of the Study Area has been subjected to deep soil disturbance events due to road and housing construction, above and below ground utilities, ditches, berms, and culvert construction. Beginning around the mid-twentieth century, development and construction usually involved wholesale topsoil removal and grading of the property that would eliminate archaeological resources. The assumption is that most of the ground-altering impacts from pre-1950s housing construction would be limited to the footprint of the structures.



According to the S & G Section 1.3.2 these areas do not retain archaeological potential (Images 1-4, 8-15, 17, 18, 21, 22, 25, 27, 28, 30; Figure 10 to Figure 13: areas highlighted in yellow) and do not require further survey.

3.1 Conclusions

The Stage 1 background study determined 11 previously registered archaeological sites are located within one kilometre of the Study Area and that part of the Study Area has been previously assessed. The one site within 50 metres has been noted to not have further cultural heritage value or interest. The property inspection determined that parts of the Study Area exhibit archaeological potential (Figure 10 to Figure 13: areas highlighted in green).

4.0 Recommendations

The following recommendations are made:

- 1) Parts of the Study Area exhibit archaeological potential. If impacted, these lands require Stage 2 archaeological assessment by test pit at five metre intervals (Figure 10 to Figure 13), prior to any construction activities;
- 2) The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance, low and wet conditions, slopes in excess of 20 degrees, or being previously assessed (P057-576-2009, P057-145, P0-13-67). These lands do not require further archaeological assessment; and,
- 3) Should the potential work extend beyond the current Study Area, further 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 Archaeology Programs Unit of the MCM should be immediately notified.

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

5.0 Legislation Compliance Advice

ASI advises compliance with the following legislation:

- This report is submitted to the MCM 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 MCM, a letter will be issued by the MCM stating that there are no further concerns with regards to alterations to archaeological sites by the potential 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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7.0 Images

7.1 Field Photography



Image 1: Sloped beyond disturbed right-of-way, no archaeological potential.



Image 2: Sloped beyond disturbed right-of-way, no archaeological potential.



Image 3: Sloped beyond disturbed right-of-way, no archaeological potential.



Image 4: Sloped beyond disturbed right-of-way, no archaeological potential.



Image 5: Archaeological potential beyond disturbed road right-of-way, test pit survey required.



Image 6: Archaeological potential beyond ditch, test pit survey required.



Image 7: Sloped beyond disturbed right-of-way, no archaeological potential.



Image 8: Low and wet beyond disturbed road right-of-way, no archaeological potential.



Image 9: Low and wet beyond disturbed road right-of-way, no archaeological potential.



Image 10: Disturbed by drainage ditching and berm construction, no archaeological potential.



Image 11: Disturbed lawn beyond road right-of-way, no archaeological potential.



Image 12: Low and wet in foreground beyond disturbed road right-of-way, no archaeological potential. Woods beyond require test pit survey.



Image 13: Low and wet beyond disturbed road right-of-way, no archaeological potential.



Image 14: Channelized Sixteen Mile Creek tributary, disturbed within the road right-of-way, no archaeological potential.



Image 15: Tributary channelized under the road, lands beyond disturbed road right-of-way require test pit survey.



Image 16: Archaeological potential beyond disturbed road right-of-way, test pit survey required.



Image 17: Disturbed beyond road right-of-way, no archaeological potential.



Image 18: Disturbed beyond road right-of-way, no archaeological potential.



Image 19: Archaeological potential beyond disturbed road right-of-way, test pit survey required.



Image 20: Archaeological potential beyond disturbed road right-of-way, test pit survey required.



Image 21: Disturbed beyond road right-of-way, no archaeological potential.



Image 22: Disturbed beyond road right-of-way, no archaeological potential.



Image 23: Archaeological potential beyond roadbed, test pit survey required.



Image 24: Archaeological potential beyond roadbed, test pit survey required.



Image 25: Disturbed industrial land and road right-of-way, no archaeological potential.



Image 26: Archaeological potential beyond roadbed, test pit survey required.



Image 27: Disturbed industrial land and road right-of-way, no archaeological potential.



Image 28: Low and wet, no archaeological potential.



Image 29: Archaeological potential on lawn, test pit survey required.



Image 30: Disturbed industrial land and road right-of-way, no archaeological potential.

7.2 Historical Imagery



Image 31: Google Earth imagery of the 5 Side Road and Regional Road 25 intersection in 2013 after the road was widened and additional lanes were added.



Image 32: Google Earth imagery of land altering development in 2015 northeast of the 5 Side Road.



Image 33: Google Earth imagery from 2019 after land altering development northeast of the 5 Side Road and Regional Road 25 intersection.



Image 34: Google Earth imagery from 2005 showing ditches in Study Area.



Image 35: Google Earth imagery from 2009 showing heavily altered landscape and berm at 9700 Regional Road 25.

8.0 Maps

Available Upon Request