Appendix B – Stage 1 Archaeological Study Report by ASi

Stage 1 Archaeological Assessment
Credit River Erosion Control
(Various Lots and Concessions, Geographical Township of Toronto, County of Peel)
City of Mississauga, Region of Peel

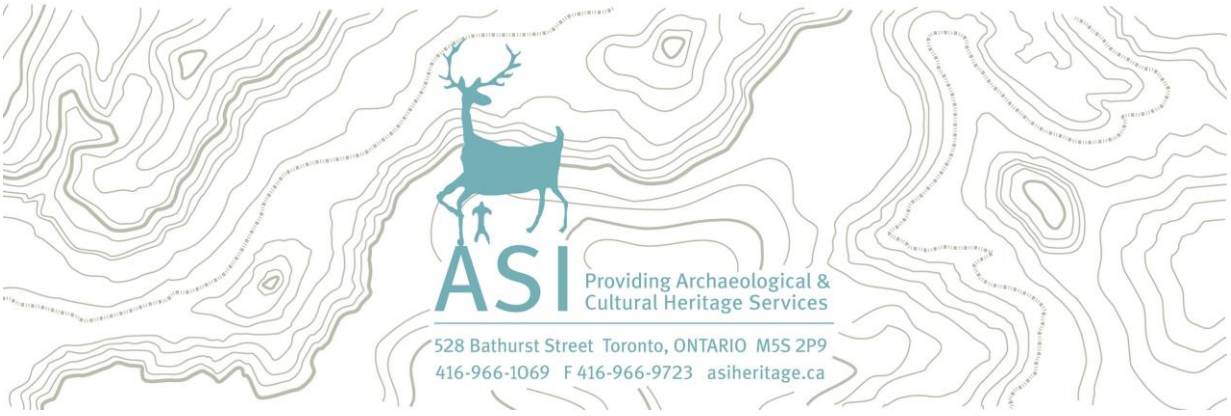
Original Report

Prepared for:

Aquafor Beech Limited
2600 Skymark Avenue
Mississauga ON L4W 5B2

Archaeological Licence: P1066 (Lytle)
PIF P1066-0374-2023
Archaeological Services Inc. File: 22EA-051

October 11, 2023



Executive Summary

Archaeological Services Inc. was contracted by Aquafor Beech Limited, on behalf of the City of Mississauga to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Credit River Erosion Control project. This project includes the extents of the Credit River extending from Dundas Street West to Highway 403 for a total creek length of approximately 4000 metres. The Culham Trail is adjacent to the river and both Erindale Park and Riverwood Park are within the Study Area.

The Stage 1 background study determined 18 previously registered archaeological sites are located within one kilometre of the Study Area, three of which are within 50 metres but will not be impacted by the proposed project works. The property inspection determined that parts of the Study Area exhibit archaeological potential and will require archaeological assessment.

The following recommendations are made:

1) Parts of the Study Area exhibit archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals. Stage 2 is required prior to any proposed construction activities on these lands;

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. These lands do not require further archaeological assessment; and,

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

Project Personnel

- **Senior Project Manager**: Lisa Merritt, MSc. (P094) Partner, Director, Environmental Assessment Division
- **Project Manager**: Eliza Brandy, MA (R1109), Associate Archaeologist, Project Manager, Environmental Assessment Division
- **Project Director**: Jessica Lytle, MSc (P1066), Lead Archaeologist, Technical Writer and Fieldwork Coordinator, Environmental Assessment Division
- **Division Coordinator**: Katrina Thach, BA Hons. (R1225), Associate Archaeologist, Assistant Manager, Environmental Assessment Division
- **Project Administrator**: Catherine Kitchen, BA (R1364), Archaeologist, Project Administrator, Environmental Assessment Division
- **Field Director**: Andrew Clish, BES (P046), Senior Archaeologist, Senior Field Director, Laboratory and Fieldwork Services, Operations Division
- **Report Preparation**: Eliza Brandy; Laura Burke, BA Hons. (R1113), Associate Archaeologist, Technical Writer and Researcher, Environmental Assessment Division
- **Graphics**: Andrew Clish; Jonas Fernandez, MSc (R281), Lead Archaeologist, Manager - Geomatics, Operations Division; Carolyn Nettleton, BA, Archaeologist, GIS Technician, Operation Division; Peter Bikoulis, PhD, Archaeologist, GIS Technician, Operation Division
- **Report Review**: Eliza Brandy, Lisa Merritt

Table of Contents

Executive Summary 2
Project Personnel 3
Table of Contents 4
1.0 Project Context 7
1.1 Development Context 7
1.1.1 Treaties 7
1.2 Historical Context 8
1.2.1 Indigenous Land Use and Settlement 8
1.2.2 Post-Contact Settlement 10
1.2.3 Map Review 13
1.2.4 Aerial and Orthoimagery Review 15
1.3 Archaeological Context 15
1.3.1 Geography 15
1.3.2 Previously Registered Archaeological Sites 17
1.3.3 Previous Archaeological Assessments 22
2.0 Property Inspection 24
2.1 Field Methods 24
2.2 Current Land Use and Field Conditions 25
3.0 Analysis of Archaeological Potential 25
3.1 Conclusions 27
4.0 Recommendations 27
5.0 Legislation Compliance Advice 28
6.0 Bibliography and Sources 29
7.0 Images 35
7.1 Field Photography 35
7.2 Historical Imagery 47

8.0 Maps 49

List of Tables

Table 1: Registered Sites within One Kilometre of the Study Area 18

List of Images

Image 1: Disturbed; no archaeological potential. 35
Image 2: Disturbed; no archaeological potential. 35
Image 3: Disturbed; no archaeological potential. 36
Image 4: Disturbed; no archaeological potential. 36
Image 5: Disturbed; no archaeological potential. 37
Image 6: Disturbed; no archaeological potential. 37
Image 7: Disturbed; no archaeological potential. 38
Image 8: Disturbed; no archaeological potential. 38
Image 9: Disturbed; no archaeological potential. 39
Image 10: Disturbed; no archaeological potential. 39
Image 11: Archaeological potential beyond sloped area; test pit survey required. 40
Image 12: Disturbed; no archaeological potential. 40
Image 13: Archaeological potential beyond disturbed area; test pit survey required. 41
Image 14: Sloped and disturbed; no archaeological potential. 41
Image 15: Archaeological potential; test pit survey required. 42
Image 16: Sloped and disturbed; no archaeological potential. 42
Image 17: Low and wet; no archaeological potential. 43
Image 18: Archaeological potential; test pit survey required. 43
Image 19: Archaeological potential; test pit survey required. 44
Image 20: Archaeological potential; test pit survey required. 44
Image 21: Sloped and low and wet; no archaeological potential. 45
Image 22: Beyond sloped area there is archaeological potential; test pit survey required. 45
Image 23: Archaeological potential beyond Credit River; test pit survey required. 46
Image 24: Archaeological potential; test pit survey required. 46

Image 25: Lake Erindale hydro pond, circa 1915 (Heritage Mississauga, 2021) 47
Image 26: Erindale dam, circa 1920 (Heritage Mississauga, 2021) 47
Image 27: 1944 (City of Mississauga, 2023) Image 28: 1963 (City of Mississauga, 2023) Image 29: 1966 (City of Mississauga, 2023) 48

List of Figures

Figure 1: Credit River Erosion Control Study Area 49
Figure 2: Study Area (Approximate Location) Overlaid on the 1859 County of Peel Map 50
Figure 3: Study Area (Approximate Location) Overlaid on the 1877 County of Peel Atlas 51
Figure 4: Study Area (Approximate Location) Overlaid on the 1909 Department of Militia and Defence Brampton Sheet 52
Figure 5: Study Area (Approximate Location) Overlaid on the 1942 Department of Militia and Defence Brampton Sheet 53
Figure 6: Study Area (Approximate Location) Overlaid on the 1994 National Topographic System Brampton Sheet 54
Figure 7: Study Area (Approximate Location) Overlaid on 1954 Aerial Photography 55
Figure 8: Study Area - Surficial Geology 56
Figure 9: Study Area - Soil Drainage 57
Figure 10: Study Area - Existing Conditions and Topography 58
Figure 11: Credit River Erosion Control Stage 1 Study Area –Key Sheet 59
Figure 12: Credit River Erosion Control Stage 1 Study Area – Sheet 1 60
Figure 13: Credit River Erosion Control Stage 1 Study Area – Sheet 2 61
Figure 14: Credit River Erosion Control Stage 1 Study Area – Sheet 3 62
Figure 15: Credit River Erosion Control Stage 1 Study Area – Sheet 4 63

1.0 Project Context

Archaeological Services Inc. (ASI) was contracted by Aquafor Beech Limited, on behalf of the City of Mississauga to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Credit River Erosion Control project. This project includes the extents of the Credit River extending from Dundas Street West to Highway 403 for a total creek length of approximately 4000 metres. The Culham Trail is adjacent to the river and both Erindale Park and Riverwood Park are within the Study Area (Figure 1).

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).

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment and property inspection was granted by Aquafor Beech Limited on November 22, 2022.

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).

1.2 Historical Context

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (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 evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 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.), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson, 1990, p. 317). By 1300-1450 C.E., this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

By 1600 C.E., the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, devastating epidemics and the traditional enmity between the Haudenosaunee and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat from southern Ontario. 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 Former Toronto Township, County of Peel, in part of Lots 3-6, Range 4 North of Dundas Street (NDS), Lots 4-6, Range 3 NDS, Lots 5-6 Range 2 NDS, Lots 3-6, Range 1 NDS, Lots 3-5, Range 1 South of Dundas Street.

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. Toronto Township

The Township of Toronto was original surveyed in 1806 by Mr. Wilmot, Deputy Surveyor. The first settler in this Township, and also the County of Peel, was Colonel Thomas Ingersoll. The entire population of the Township in 1808 consisted of seven families, scattered along Dundas Street. The number of inhabitants gradually increased until the war broke out in 1812, which gave considerable check to its progress. When the war was over, the Township's growth revived, and the rear part of the Township was surveyed and called the "New Survey." The greater part of the New Survey was granted to a colony of Irish settlers from New York City, who suffered persecution during the war (Pope, 1877).

The Hamilton and Toronto Railway was formed in 1852, and in 1855, completed its lake shore route across the south end of Lot 11. In 1871, the railway was amalgamated with the Great Western Railway, which in turn, was amalgamated in 1882, with the Grand Trunk Railway. The Grand Trunk Railway was amalgamated in 1923, with Canadian National Railway (Andreae, 1997, pp. 126–127).

1.2.2.2. Erindale

The village of Erindale was established in 1822 after Thomas Racey constructed a sawmill on the Credit River, just south of Dundas Street. By 1824, a village site was laid out, first called Toronto, Credit, Springfield, Springfield-on-the-Credit, and finally Erindale in the early 1900s (Heritage Mississauga, 2009). The village was a stopping place for stagecoach travelers between Dundas and York (now Hamilton and Toronto), along Dundas Street. Early settlers included Emerson Taylor, who operated the Royal Exchange Hotel; John McGill, the first flour miller; Dr. Beaumont Dixie, an early physician, Duncan Turpel, a blacksmith, notary and stagecoach operator; John Barker, the postmaster and storekeeper; and Edwin Turner and Christopher Boyes, who were prominent merchants; and General Peter Adamson, who held early Anglican church services in his home until St. Peter's Anglican Church was built in 1826. This was the only Anglican Church west of Toronto, later rebuilt in 1887, and still stands today. The village saw a period of decline when it was bypassed by the Great Western Railway,

despite the Credit Valley Railway station being built in 1879. In the early 1900s Erindale was the centre of a large hydroelectric project which brought growth in the village until a devastating fire in 1919. Erindale amalgamated with other villages in Toronto Township in 1968 to form the Town of Mississauga. The town became the City of Mississauga in 1974 (Heritage Mississauga, 2009).

1.2.2.3. Erindale Hydroelectric Dam

Beginning in 1898, plans to harness the natural water resources of the Credit River for hydroelectricity were being discussed. In 1901 the endeavour focused on the bend on the Credit River at Erindale. Construction on the dam began in 1904 under the direction of the Southern Light and Power Company. The Company went bankrupt in 1906, with the project still incomplete. The hydro development commenced again under the direction of the Erindale Power Company in 1909. In March of 1910, the last 150-foot section in the middle portion of the dam was being filled in, and the powerhouse was transmitting power. On March 7, 1910, a 35-foot-high centre portion of the nearly completed dam collapsed, as the water behind the dam had risen to dangerous levels due to a sudden spring thaw. The massive spring flood washed out a large section of Dundas Street and the Dundas Street Bridge over the Credit River. This was not repaired until the summer of 1910. By August of 1910, the dam had been patched and the operation was back up and running (Image 25, Image 26).

The dam on the Credit River (in what is today Erindale Park) created a head pond (known locally as “Lake Erindale”) that covered 125 acres. The water was conveyed through a tunnel from the lake, running under Dundas Street, and dropping down into the Powerhouse via large pipes to turn the turbines which were directly connected to generators. The water then exited the powerhouse via the tail race and rejoined the river on the south side of Erindale Village (Wilkinson, 2021).

When it was fully operational, which was seldom, the Hydroelectric Station of the Erindale Power Company provided electricity via a wood-pole transmission line to substations in West Toronto supplying power to North Toronto, New Toronto, Swansea, Islington, Erindale, Cooksville, Dixie, Long Branch, Mimico and Lambton, through a common grid system (Wilkinson, 2021).

The newly formed Ontario Hydro-Electric Power Commission purchased the facility in 1916, and in 1917 the powerhouse caught fire. It was out of operation for a short time, reopening in the late fall of 1917. On April 6, 1912, a smaller dam upstream failed, and a tremendous spring flood occurred which washed out a 10-foot-tall centre portion of the dam, reducing the height of water in the lake. Repaired again, the dam failed once more in 1923, collapsing part of the repaired centre section and sluiceway and reducing the water level in the head pond. The facility operated until mid-1923 when the Chippewa plant in Niagara was opened. After the facility closed, maintenance on the dam declined. Another flood in 1935 threatened to undermine the dam. Between 1938 and 1940 the hydro pond ("Lake Erindale") was drained, and the dam was finally demolished in 1941 after major safety concerns were raised by nearby residents. The remnants of the powerhouse were removed in 1977 (Wilkinson, 2021).

1.2.3 Map Review

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

The 1859 *Tremaine's Map of the County of Peel* (Tremaine, 1859) and the 1877 *Illustrated Historical Atlas of the County of Peel,* Toronto Township page (Pope, 1877) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Figure 2 and Figure 3). The 1859 map shows the large lots within the Study Area. One built structure is shown close to

the Credit River in the lot labelled “S.M. Chas. Adamson”. The blacked-out squares identify what was then named the village of Springfield at the most southern portion of the Study Area. The Credit River is shown meandering through the southwest side of the Study Area. The historic Burnhamthorpe Road cuts through the northern portion of the Study Area in a northeast to southwest direction. On the west side, two tributaries connect with the Credit River within the Study Area. One connects near the middle, the other at the south end.

The 1877 map continues to show the rural nature of the Study Area, with the exception of the village in the south end. A post office is now labelled in this area. One farmstead with a historic building is identified just east of the middle of the Study Area. At least one other structure is drawn in the most northern lot.

The 1909, 1942, and 1994 topographic maps, Brampton Sheets (Department of Energy, Mines and Resources, 1994; Department of Militia and Defence, 1909; Department of National Defence, 1942) were examined to determine the extent and nature of development and land uses within the Study Area.

The 1909 topographic map (Figure 4) shows a footbridge along Burnhamthorpe Road within the Study Area. The village at the south end is now named Erindale. A bridge is drawn west of Erindale on Dundas Road. The sloped lines and tributaries near the Credit River are now drawn in more detail. The aforementioned historic structures in the north end of the Study Area are no longer shown. Erindale Station is illustrated north of the Study Area.

The 1942 topographic map (Figure 5) shows similar attributes to the 1909 topographic map. On this map Dundas Street is now labelled and more residential buildings are within the southern perimeter of the Study Area. The Credit River maintains a similar alignment as the 1909 topographic map with the exception of a larger pool of water north of Dundas Street, Lake Erindale. On the 1994 topographic map (Figure 6) Lake Erindale has been drained. The Erindale dam is now labelled in this location. The dashed line on the northeast side of the Credit River represents the path of the recreational Credit Valley Trail. The 1994 topographic map shows a great increase in residential and commercial development surrounding the Study Area.

1.2.4 Aerial and Orthoimagery Review

Historical aerial imagery from 1944, 1954, 1963, 1966 and 1989 (City of Mississauga, 2023; Hunting Survey Corporation Limited, 1954) were reviewed (Image 27 – **Error! Reference source not found.**; Figure 7). The 1944 and 1954 images show the Credit River in a similar alignment and that the river is primarily surrounded by agricultural and wooded areas. The 1963 aerial (**Error! Reference source not found.**) shows the change in shape of the river due to channelization and supportive water infrastructure. The bend in the Credit River within the Study Area has been modified and is curved smoothly, similar to the letter "J".

A review of available Google satellite imagery from 2004 to 2022 shows no instances of significant land alterations within the Study Area during this timeframe.

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 Iroquois Plain physiographic region of southern Ontario, a lowland region bordering Lake Ontario. This region is characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 kilometres (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are

quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196).

Figure 8 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by modern alluvial deposits, older alluvial deposits, Paleozoic bedrock and glaciolacustrine derived silty to clayey till (Ontario Geological Survey, 2010). Soils in the Study Area consist of Fox, a sandy loam with good drainage, Bottom Land, an alluvial with variable drainage and Chinguacousy, a clay loam with imperfect drainage. Figure 9 illustrates drainage within the Study Area.

The Credit River watershed drains an area of approximately 860 square kilometres from its headwaters in Orangeville, Erin, and Mono, passing through part of the Niagara Escarpment and the Oak Ridges Moraine, and draining into Lake Ontario at the town of Port Credit (Credit Valley Conservation, 2009). The river was named "*Mis.sin.ni.he*" or "*Mazinigae-zeebi*" by the Mississaugas, and surveyor Augustus Jones believed this signified "the trusting creek" or could also be translated as "to write or give and make credit", while the French name used when the river was first mapped in 1757 was "*Riviere au Credit*". These names refer to the fur trading period, when the French, British, and Indigenous traders would meet along this river (Gibson, 2002, p. 177; Jameson, 1838, pp. 73–74; Rayburn, 1997, p. 84; Robb et al., 2003, p. 6; Scott, 1997, p. 182; Smith, 1987, pp. 255–257). The Credit River was historically considered to be one of the best potential power sources for milling in all of southern Ontario, which led to the development of early of saw and grist mill industries, and later textile mills, distilleries, bottling plants, and hydro-electric plants spawned communities throughout the river valley, typically close to the Niagara Escarpment (Town of Caledon, 2009, p. 7.1).

1.3.2 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) 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 *AjGw.*

According to the OASD, 18 previously registered archaeological sites are located within one kilometre of the Study Area. Three of these sites are located within 50 metres of the broader Study Area, however they are not within 50 metres of the proposed Limit of Disturbance (MCM, 2023). A summary of sites is provided below in Table 1.

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

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGv-76	Shaft 3 FS 1 FS 10	Post-Contact	Unknown	Archaeological Research Associates Ltd. 2012
AjGv-85	Winding Lane Bird Sanctuary H1 Site	Post-Contant	Midden	Archeoworks Inc. 2017
AjGv-94	Daniels 7	Pre-Contact Indigenous	Findspot	Ontario Museum of Archaeology, 1988
AjGw-23	McConnell	Unknown	Unknown	1975
AjGw-40	Marchesse	Indigenous	Campsite	1980

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-214	Staggall	Post-Contact	Homestead	Mayer, Poulton & Association Inc. 1990
AjGw-222	Chappell Terrace	Woodland	Campsite	ASI 1984
AjGw-433		Post-Contact	Unknown	The Archaeologists Inc. 2006
AjGw-434		Post-Contact	Homestead	The Archaeologists Inc. 2004
AjGw-435		Post-Contact	Dump	The Archaeologists Inc. 2004
AjGw-436		Indigenous	Findspot	The Archaeologists Inc. 2004
AjGw-534		Euro-Canadian	Outbuilding, residential	University of Toronto Mississauga 2013, 2015, 2017, 2018, 2019

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-535	Iverholme	Euro-Canadian	House, residential	University of Toronto Mississauga 2013, 2015
AjGw-578		Woodland	Campsite	Timmins Martelle Heritage Consultants Limited, 2022
AjGw-580		Middle Archaic	Campsite	Archaeological Research Associates Ltd., 2018
AjGw-582		Indigenous	Scatter	Archaeological Research Associates Ltd., 2018
AjGw-638		Post-Contact	Domestic Occupation	Timmins Martelle Heritage Consultants Limited, 2022
NDFS-0101		Indigenous	Unknown	Past Recovery Archaeological Services, 2018

1.3.2.1. Registered Sites within 50 Metres

AjGw-534

According to the OASD, AjGw-534 is documented in a report currently awaiting MCM review (P160-009-2021) on University of Toronto Mississauga campus, on the right bank above the Credit River downstream of its confluence with Mullet Creek. This site was identified during the Schreiber Wood Project. Hand and block excavation within the context of a field school identified Site AjGw-534, a post-contact residence with an inferred date of 1880-1910. The site map and boundary of AjGw-534 is shown within the *Supplementary Documentation* this report. The site has further cultural heritage value or interest (CHVI). It will not be impacted by the Credit River Erosion project, as it is beyond the proposed Limit of Disturbance and at the top of the river bank.

AjGw-580 and AjGw-582

The location of AjGw-580 and AjGw-582 are shown within the *Supplementary Documentation* of this report. Neither site will be impacted by the Credit River Erosion Control project, as it is beyond the proposed Limit of Disturbance and at the top of the river bank.

Sites AjGw-580 and AjGw-582 are both located on the property at Promontory Woods Park within 50 metres of the Study Area and have further CHVI. They were both identified during a Stage 1 to 3 archaeological assessment conducted in 2018 (P007-0904-2018 and P007-0924-2018). Site AjGw-580 is a 26 by 11 metre scatter of predominantly Indigenous artifacts. A Euro-Canadian component associated with the 20th century was also documented. The Stage 3 assessment determined the full extent of the site. Site AjGw-580 requires a Stage 4 mitigation of development impacts (Archaeological Research Associates Ltd, 2019).

Site AjGw-582 was discovered during Stage 2 test pit survey of the woodlot. It comprises a small scatter of non-diagnostic Indigenous archaeological materials within a 2.6 by 1.6 metre area. The function of the site is indeterminate. Site AjGw-582 warrants a Stage 3 site-specific assessment and retains further CHVI.

It is unclear if the site will require a Stage 4 mitigation of development impacts (Archaeological Research Associates Ltd, 2019).

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.

- *(Archaeological Services Inc., 1991) An Archaeological Assessment of Mississauga Public Garden, City of Mississauga, Regional Municipality of Peel, Ontario (#91-15)*
    - ASI assessed the Mississauga Public Garden, overlapping part of the Study Area north of Burnhamthorpe Road West (License #91-15). A preliminary site visit and visual survey also determined that the low-lying floodplain areas were of low archaeological potential and were not subject to intensive investigation. Visual inspection determined part of the project area was disturbed, and as such, these areas were not tested. Test pit survey was conducted at five metre intervals in four terraced areas determined to exhibit potential: Zaichuck Terrace, McEwan Terrace, Bird Terrace and Chappell Terrace. No significant material was encountered at Zaichuck Terrace (320 test pits excavated), or at Bird Terrace (200 test pits). A total of 1,140 test pits were excavated within McEwan Terrace, and two historic refuse deposits were identified. Elsewhere, deposits dated to the early to mid-twentieth century. Chappell Terrace consisted of pre-contact Indigenous artifacts and was recommended for further survey. The site was later mitigated by ASI (Archaeological Services Inc., 2002) and is greater than 50 metres from the current Study Area.

    - Due to the late nature of the deposits, no further archaeological assessment was warranted. Due to the low quality of past mapping, the current Study Area should be re-tested by Stage 2 test pit survey, if impacted by construction activities, due to the high potential of the area.

- *(Archaeological Services Inc., 2022) Stage 1 Archaeological Assessment, Mississauga Structure 024001, Lots 4-5, Range 3-4 NDS, (Former Township of Toronto, County of Peel), City of Mississauga, Regional Municipality of Peel (P1066-0158-2020)*
    - This project area overlaps with the current Study Area along Burnhamthorpe Road West over the Credit River eastbound and westbound bridges (structure 024001). This archaeological assessment determined that the project area has archaeological potential and that these lands require Stage 2 archaeological assessment by test pit survey at five metre intervals. In addition, the marine archaeological potential of the Credit River is to be evaluated by following the *Criteria for Evaluating Marine Archaeological Potential A Checklist for Non-Marine Archaeologists* (MCM, 2016) checklist if project impacts to the riverbed are proposed.

- *(Archaeological Assessments Ltd., 2019) Stage 1, 2 and 3 Archaeological Assessments, Promontory Woods, 3870 Promontory Crescent, City of Mississauga, Regional Municipality of Peel, Part of Lots 4–5, Range 3 North of Dundas Street, Geographic Township of Toronto, Peel County, Ontario [P007-0904-2018, P007-0924-2018]*
    - The project area is within 50 metres of the current Study Area, and was located at Promontory Woods at 3870 Promontory Crescent. Stage 2 assessment of the identified areas of archaeological potential resulted in the discovery of three locations of archaeological materials: Site 1 (AjGw-580), Site 2 and Site 3 (AjGw-582). Only Sites 1 and 3 were determined to have CHVI. subject to Stage 3 site-specific assessment. AjGw-580 was determined to be in the area of proposed project impacts, and was subject to Stage 3 site-specific assessment. The project was then cancelled.

    - If impacted, AjGw-580 was recommended to be subject to Stage 4 excavation in accordance with the requirements set out in Section 4.2.1, Section 4.2.2, and Section 4 of the S & G.

- If impacted, AjGw-582 was recommended to be subject to Stage 3 site-specific assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the S & G.

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 Andrew Clish (P046) of ASI, on October 3, 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 systematic visual inspection from publicly accessible lands and 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 7.0 (Image 1 to Image

24), and field observations are overlaid onto the existing conditions of the Study Area in Section 8.0 (Figure 12 to Figure 15).

2.2 Current Land Use and Field Conditions

The broader Study Area includes the extents of the Credit River extending from Dundas Street West to Highway 403 for a total creek length of approximately 4000 metres. The Culham Trail is adjacent to the east side of the Credit River. It travels through open areas and wooded areas. Slope reinforcement is evident along parts of the wooded trail and along the path near and including the Credit River. Stabilization rocks and retaining walls are some of the visible methods used for slope stabilization within the Limit of Disturbance and within the general Study Area. During field review low and wet areas were noted east and west of Burnhamthorpe Road, north and south of the Culham Trail. The southeast end of the Study Area contains Erindale Park and the Erindale Dam. Erindale Park contains a flat, landscaped area with recreational amenities such as a playground and picnic tables.

Figure 10 details the locations of sanitary mains, water mains, storm segments, ice breakers, water mains and wastewater mains within the Study Area. Figure 12 to Figure 15 indicate the Limit of Disturbance which represent the access roads and work sites for the project.

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 within one kilometre (See Table 1);
- Water sources within 300 metres: primary, secondary, or past water source (Credit River);
- Well-drained soils (Fox);
- Early settlements within 100 metres (Erindale);

- Early historic transportation routes within 100 metres (Burnhamthorpe Road, Dundas Street)

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 City of Mississauga Heritage Properties Map (City of Mississauga, 2022) was consulted and no properties within the Study Area Listed or Designated under the *Ontario Heritage Act*:

Part of the Study Area has been previously assessed and does not require further archaeological assessments (Figure 14, Figure 15: 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, associated with the Credit River valley, and according to the S & G Section 2.1 do not retain potential (Image 11, Image 14, Image 16, Image 21, Image 22; Figure 12 to Figure 15: areas highlighted in pink). These areas do not require further survey.

A part of the Study Area is located within low lying wet areas, and according to the S & G Section 2.1 do not retain potential (Image 17 and Image 21; Figure 14, Figure 15: areas highlighted in light blue). These areas do not require further survey.

Part of the Study Area includes the unmodified watercourse of the Credit River (Figure 14, Figure 15: areas highlighted in dark blue). If impacts to the riverbed are proposed, marine archaeological potential will be evaluated through a separate process following the MCM's (2016) *Criteria For Evaluating Marine Archaeological Potential* checklist.

Part of the Study Area has been subjected to deep soil disturbance events due to river channelization, slope stabilization, twentieth-century dam construction and subsequent land infilling, trail paths, buildings, parking lots, bridges, and buried infrastructure (sanitary mains, water mains, storm segments, ice

breakers, water mains, wastewater mains) (Figure 10). According to the S & G Section 1.3.2 these areas do not retain archaeological potential (Image 1 to Image 10, Image 12 to Image 14, Image 16; Figure 12 to Figure 15: areas highlighted in yellow) and do not require further survey.

The property inspection determined that the remainder of the Study Area exhibits archaeological potential. These areas will require Stage 2 survey prior to any construction activities or other proposed impacts. 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 (Image 11, Image 13, Image 15, Image 18 to Image 20, Image 22 to Image 24; Figure 13 to Figure 15: areas highlighted in green).

3.1 Conclusions

The Stage 1 background study determined 18 previously registered archaeological sites are located within one kilometre of the Study Area, three of which are within 50 metres but will not be impacted by the proposed project works. The property inspection determined that parts of the Study Area exhibit archaeological potential and will require archaeological assessment (Figure 12 to Figure 15: areas highlighted in green).

4.0 Recommendations

The following recommendations are made:

1) Parts of the Study Area exhibit archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals (Figure 12 to Figure 15). Stage 2 is required prior to any proposed construction activities on these lands;

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. These lands do not require further archaeological assessment; and,

3) Should the proposed 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 S & G 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 proposed development.

- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a

known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological field work on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

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

- The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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

6.0 Bibliography and Sources

Andreae, C. (1997). *Lines of Country: An Atlas of Railway and Waterway History in Canada*. Boston Mills Press.

Archaeological Assessments Ltd. (2019). *Stage 1, 2 and 3 Archaeological Assessments, Promontory Woods, 3870 Promontory Crescent, City of Mississauga, Regional Municipality of Peel, Part of Lots 4–5, Range 3 North of Dundas Street, Geographic Township of Toronto, Peel County, Ontario [P007-0904-2018, P007-0924-2018]*.

Archaeological Research Associates Ltd. (2019). *Stage 1, 2 and 3 Archaeological Assessments, Promontory Woods, 3870 Promontory Crescent City of Mississauga, Regional Municipality of Peel, Part of Lots 4–5, Range 3 North of Dundas Street, Geographic Township of Toronto, Peel County, Ontario*. Report on file with the Ministry of Citizenship and Multiculturalism.

Archaeological Services Inc. (1991). *An Archaeological Assessment of Mississauga Public Garden, City of Mississauga, Regional Municipality of Peel, Ontario #91-15*. Report on file with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries.

Archaeological Services Inc. (2002). *Stage 4 Salvage Excavation of the Chappell Terrace Site (AjGw-222), Mississauga Public Garden, Part of Lot 27, Concession 2, N.D.S., (Former Toronto Township), City of Mississauga, Regional Municipality of Peel. CIF 2000-016-066*. Report on file with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries.

Archaeological Services Inc. (2006). *Historical Overview and Assessment of Archaeological Potential Don River Watershed, City of Toronto*. Report on file with the Ontario Ministry of Tourism, Culture and Sport.

Archaeological Services Inc. (2022). *Stage 1 Archaeological Assessment, Mississauga Structure 024001, Lots 4-5, Range 3-4 NDS, (Former Township of Toronto, County of Peel), City of Mississauga, Regional Municipality of Peel (P1066-0158-2020)*. Report on file with the Ontario Ministry of Citizenship and Multiculturalism.

Birch, J., Manning, S. W., Sanft, S., & Conger, M. A. (2021). Refined Radiocarbon Chronologies for Northern Iroquoian Site Sequences: Implications for Coalescence, Conflict, and the Reception of European Goods. *American Antiquity*, *86*(1), 61–89.

Birch, J., & Williamson, R. F. (2013). *The Mantle Site: An Archaeological History of an Ancestral Wendat Community*. Rowman & Littlefield Publishers, Inc.

Brown, J. (1995). On Mortuary Analysis – with Special Reference to the Saxe-Binford Research Program. In L. A. Beck (Ed.), *Regional Approaches to Mortuary Analysis* (pp. 3–23). Plenum Press.

Chapman, L. J., & Putnam, F. (1984). *The Physiography of Southern Ontario* (3rd ed., Vol. 2). Ontario Ministry of Natural Resources.

City of Mississauga. (2023). *Mississauga Aerial Photography 1944—2021* [Map]. http://www6.mississauga.ca/missmaps/#map=12/-8869298.08/5399105.86/0

City of Mississauga. (2022, August 9). *City of Mississauga Heritage Properties Map*. https://data.mississauga.ca/datasets/mississauga::city-heritage-properties/explore?location=43.564043%2C-79.670667%2C15.69

Credit Valley Conservation. (2009). *Rising to the Challenge: A Handbook for Understanding and Protecting the Credit River Watershed*.

Department of Energy, Mines and Resources. (1994). *Brampton Sheet 30M/12* [Map].

Department of Militia and Defence. (1909). *Brampton Sheet No. 35* [Map].

Department of National Defence. (1942). *Brampton Sheet* [Map].

Dodd, C. F., Poulton, D. R., Lennox, P. A., Smith, D. G., & Warrick, G. A. (1990). The Middle Ontario Iroquoian Stage. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 321–360). Ontario Archaeological Society Inc.

Edwards, T. W. D., & Fritz, P. (1988). Stable-Isotope Paleoclimate Records from Southern Ontario, Canada: Comparison of Results from Marl and Wood. *Canadian Journal of Earth Sciences*, *25*, 1397–1406.

Ellis, C. J., & Deller, D. B. (1990). Paleo-Indians. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 37–64). Ontario Archaeological Society Inc.

Ellis, C. J., Kenyon, I. T., & Spence, M. W. (1990). The Archaic. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 65–124). Ontario Archaeological Society Inc.

Ellis, C. J., Timmins, P. A., & Martelle, H. (2009). At the Crossroads and Periphery: The Archaic Archaeological Record of Southern Ontario. In T. D. Emerson, D. L. McElrath, & A. C. Fortier (Eds.), *Archaic Societies: Diversity and Complexity across the Midcontinent.* (pp. 787–837). State University of New York Press.

Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community. (2022). *World Topographic Map* [Map]. https://www.arcgis.com/home/item.html?id=7dc6cea0b1764a1f9af2e679f642f0f5.

Ferris, N. (2013). Place, Space, and Dwelling in the Late Woodland. In M. K. Munson & S. M. Jamieson (Eds.), *Before Ontario: The Archaeology of a Province* (pp. 99–111). McGill-Queen's University Press. http://www.jstor.org/stable/j.ctt32b7n5.15

Gibson, M. M. (2002). Changes at the River's Mouth: The Port Credit Community. In *Mississauga: The First Ten Thousand Years* (F.A. Dieterman). Eastend Books.

Heritage Mississauga. (2009). *Erindale*. http://www.heritagemississauga.com/page/Erindale

Heritage Mississauga. (2021). *Way Back Wednesday: The fascinating history of Mississauga's Erindale Hydroelectric Dam*. Heritage Mississauga. https://heritagemississauga.com/way-back-wednesday-the-fascinating-history-of-mississaugas-erindale-hydroelectric-dam/

Hunting Survey Corporation Limited. (1954). *1954 Air Photos of Southern Ontario*. https://mdl.library.utoronto.ca/collections/air-photos/1954-air-photos-southern-ontario/index

Jameson. (1838). *Winter Studies and Summer Rambles in Canada*.

Karrow, P. F., & Warner, B. G. (1990). The Geological and Biological Environment for Human Occupation in Southern Ontario. In *The Archaeology of Ontario to A.D. 1650* (pp. 5–36). London Chapter, Ontario Archaeological Society.

Ministry of Citizenship and Multiculturalism. (1990). *Ontario Heritage Act, R.S.O. c. O.18*.

Ministry of Citizenship and Multiculturalism. (2016). *Criteria for Evaluating Marine Archaeological Potential A Checklist for Non-Marine Archaeologists*.

Ministry of Citizenship and Multiculturalism. (2022). *Ontario's Past Portal*. PastPortal. https://www.pastport.mtc.gov.on.ca

Ministry of Citizenship and Multiculturalism. (2023). *Ontario's PastPortal*. PastPortal. https://www.pastport.mtc.gov.on.ca

Environmental Assessment Act, R.S.O. c. E.18, (1990).

Mississauga of the New Credit First Nation. (2001). *Toronto Purchase Specific Claim: Arriving at an Agreement*.

Mississaugas of the Credit First Nation. (2017). *Treaty Lands and Territory*. http://mncfn.ca/category/treaty-lands-and-territory/

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

Municipal Engineers Association. (2023). *Municipal Class Environmental Assessment*.

Ontario Geological Survey. (2010). *Surficial geology of Southern Ontario. Miscellaneous Release—Data 128 – Revised.* [Map]. http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD128-REV

Pope, J. H. (1877). *Illustrated Historical Atlas of the County of Peel, Ont.* [Map]. Walker and Miles.

Rayburn, A. (1997). *Place Names of Ontario*. University of Toronto Press.

Robb, G., Dilse, P., Henderson, H., Hermsen, B., Shearer, W., & Stewart, P. (2003). *Heritage Conservation Feasibility Study of Old Port Credit Village, Stage 1 Report. Prepared for the City of Mississauga*.

Rogers, E. S. (1962). *The Round Lake Ojibwa*. Royal Ontario Museum.

Scott, W. B. (1997). *Ontario Place Names: The Historical, Offbeat or Humorous Origins of More Than 1,000 Communities*. Lone Pine Publishing.

Smith, D. B. (1987). *Sacred Feathers: The Reverend Peter Jones (Kahkewaquonaby) & the Mississauga Indians*. University of Toronto Press.

Spence, M. W., Pihl, R. H., & Murphy, C. (1990). Cultural Complexes of the Early and Middle Woodland Periods. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650*. Ontario Archaeological Society Inc.

Town of Caledon. (2009). *Cultural Heritage Landscape Inventory Report*.

Tremaine, G. C. (1859). *Tremaine's Map of the County of Peel* [Map]. George C. Tremaine.

Wilkinson, M. (2021, October 6). *The fascinating history of Mississauga's Erindale Hydroelectric Dam*. Modern Mississauga. https://www.modernmississauga.com/main/2021/10/6/the-fascinating-history-of-mississaugas-erindale-hydroelectric-dam

Williamson, R. F. (1990). The Early Iroquoian Period of Southern Ontario. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 291–320). Ontario Archaeological Society Inc.

7.0 Images

7.1 Field Photography

Image 1: Disturbed; no archaeological potential.

Image 2: Disturbed; no archaeological potential.

Image 3: Disturbed; no archaeological potential.

Image 4: Disturbed; no archaeological potential.

Image 5: Disturbed; no archaeological potential.

Image 6: Disturbed; no archaeological potential.

Image 7: Disturbed; no archaeological potential.

Image 8: Disturbed; no archaeological potential.

Image 9: Disturbed; no archaeological potential.

Image 10: Disturbed; no archaeological potential.

Image 11: Archaeological potential beyond sloped area; test pit survey required.

Image 12: Disturbed; no archaeological potential.

Image 13: Archaeological potential beyond disturbed area; test pit survey required.

Image 14: Sloped and disturbed; no archaeological potential.

Image 15: Archaeological potential; test pit survey required.

Image 16: Sloped and disturbed; no archaeological potential.

Image 17: Low and wet; no archaeological potential.

Image 18: Archaeological potential; test pit survey required.

Image 19: Archaeological potential; test pit survey required.

Image 20: Archaeological potential; test pit survey required.

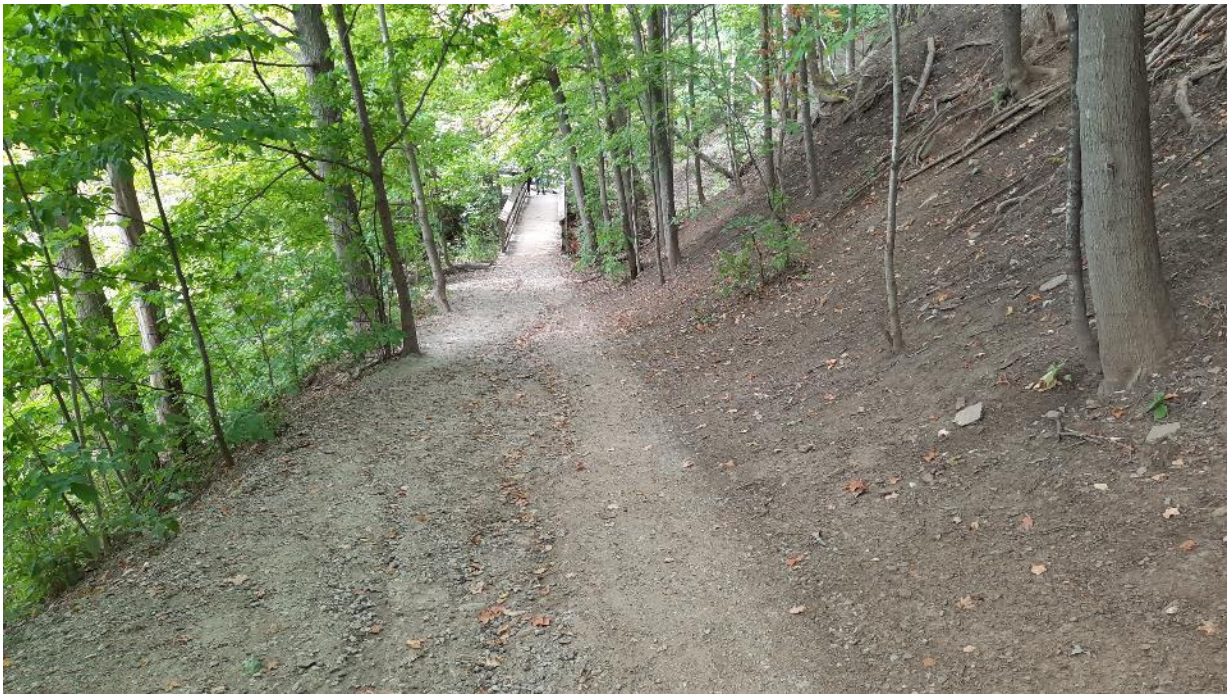


Image 21: Sloped and low and wet; no archaeological potential.

Image 22: Beyond sloped area there is archaeological potential; test pit survey required.

Image 23: Archaeological potential beyond Credit River; test pit survey required.

Image 24: Archaeological potential; test pit survey required.

7.2 Historical Imagery

Image 25: Lake Erindale hydro pond, circa 1915 (Heritage Mississauga, 2021)

Image 26: Erindale dam, circa 1920 (Heritage Mississauga, 2021)

Image 27: 1944 (City of Mississauga, 2023)

Image 28: 1963 (City of Mississauga, 2023)

Image 29: 1966 (City of Mississauga, 2023)

8.0 Maps

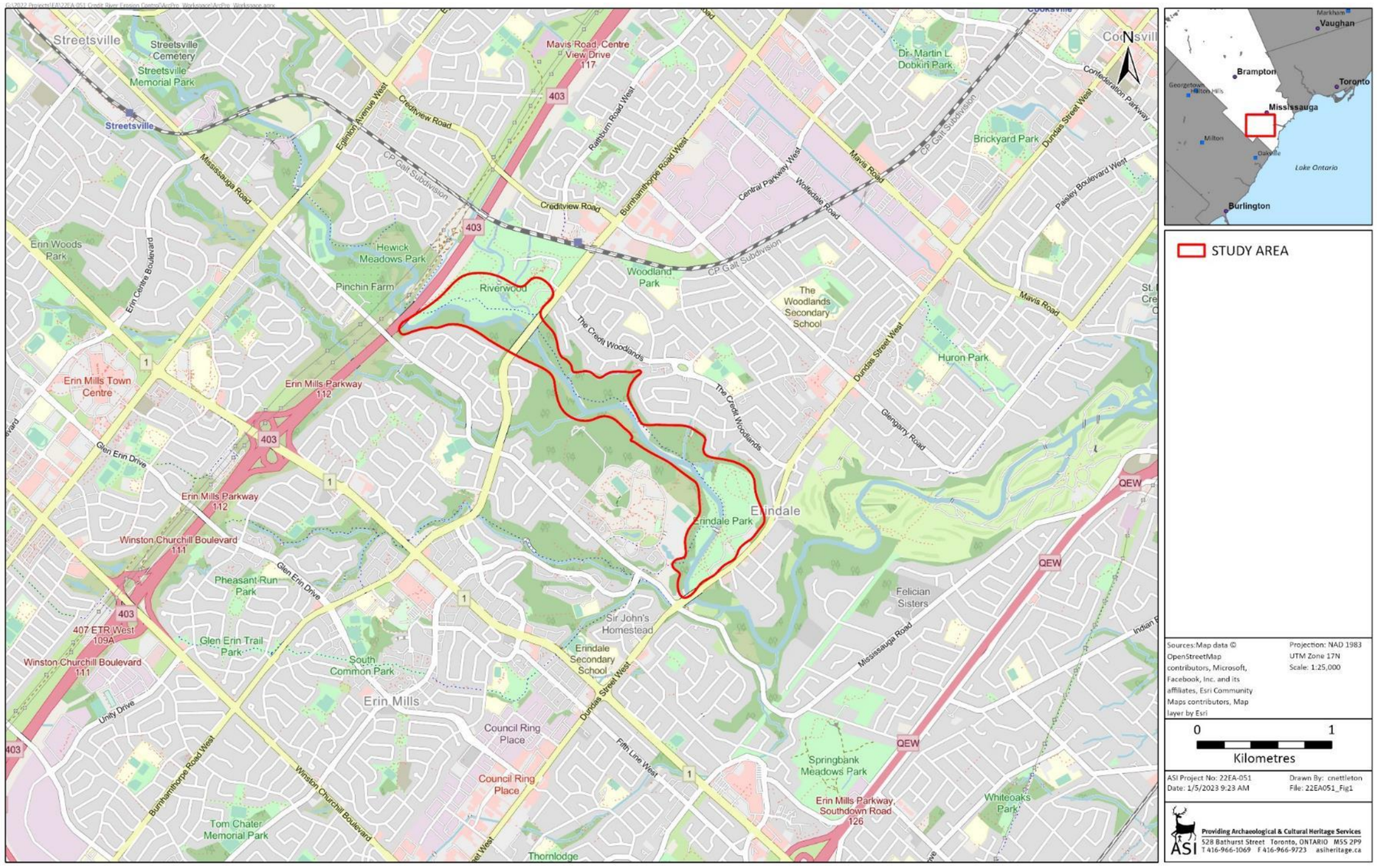


Figure 1: Credit River Erosion Control Study Area

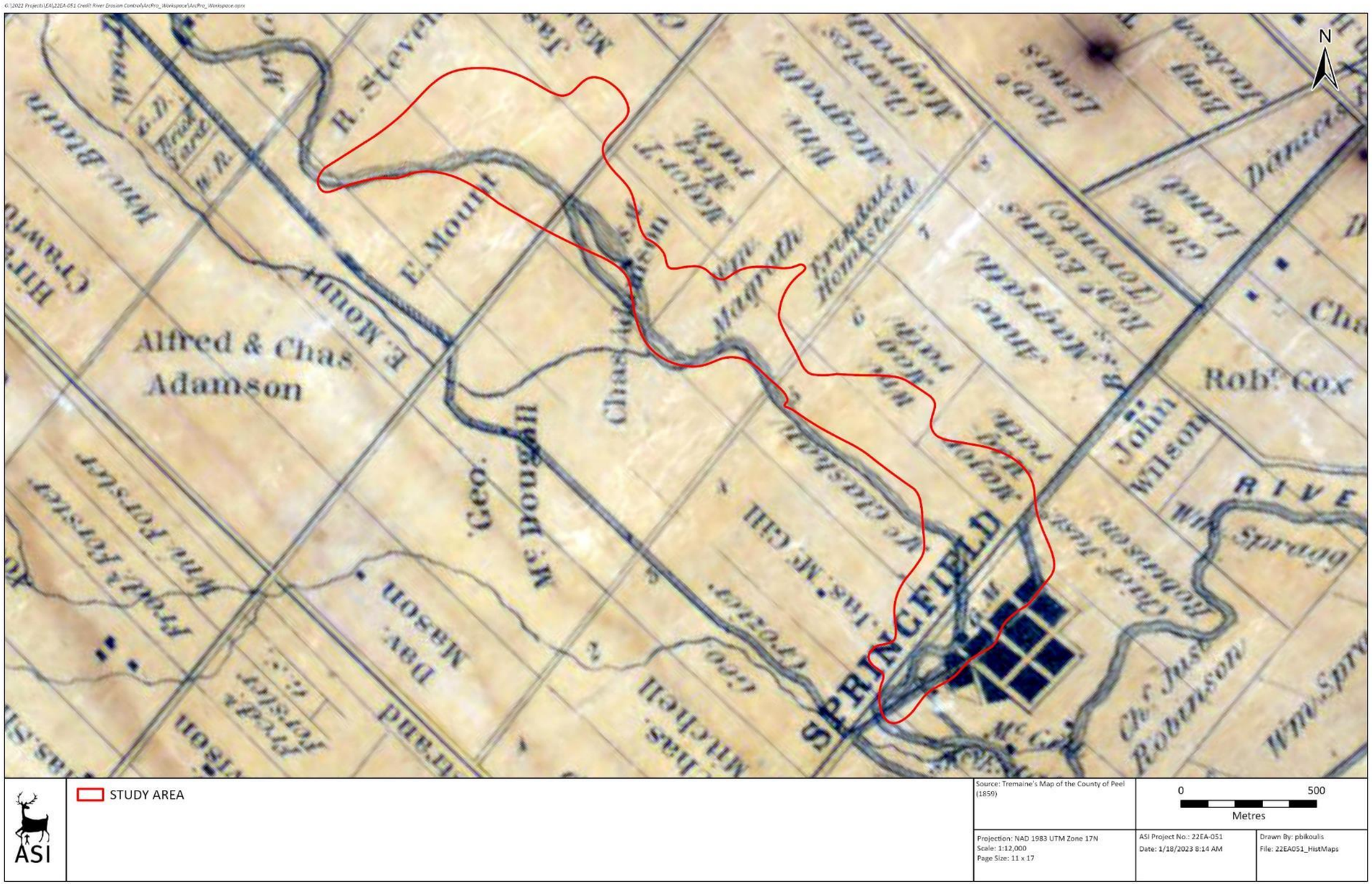


Figure 2: Study Area (Approximate Location) Overlaid on the 1859 County of Peel Map

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

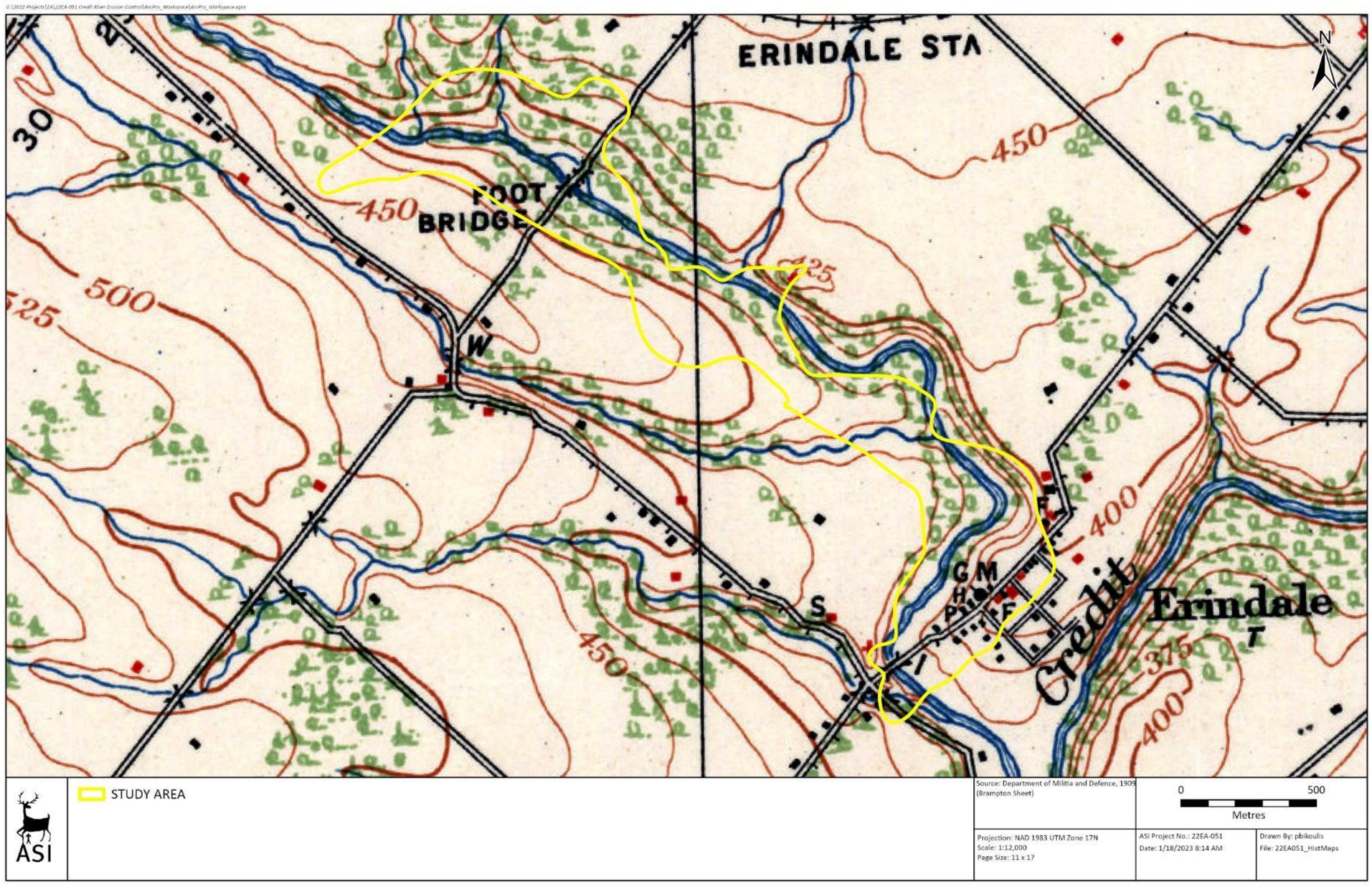


Figure 4: Study Area (Approximate Location) Overlaid on the 1909 Department of Militia and Defence Brampton Sheet

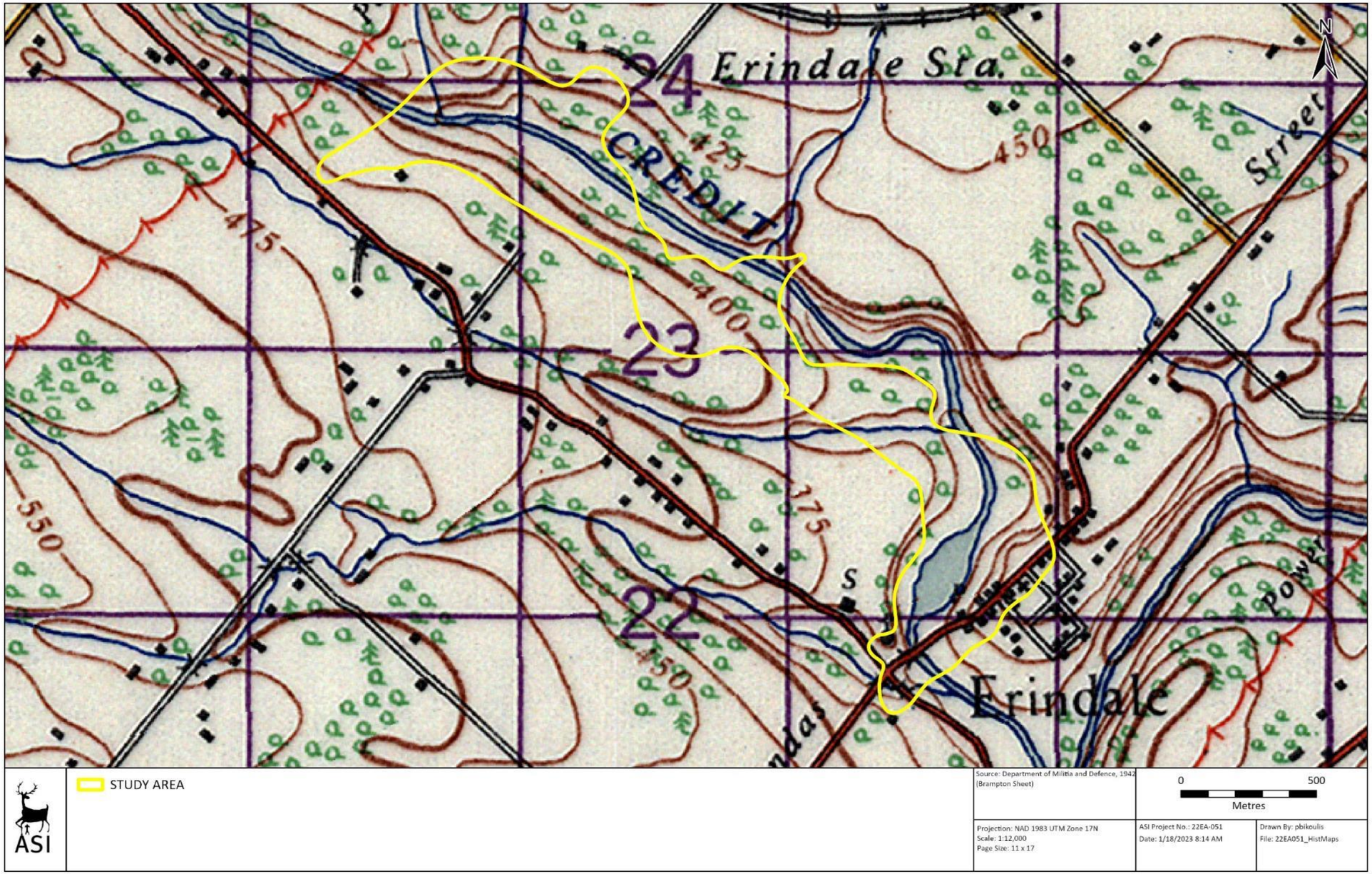


Figure 5: Study Area (Approximate Location) Overlaid on the 1942 Department of Militia and Defence Brampton Sheet

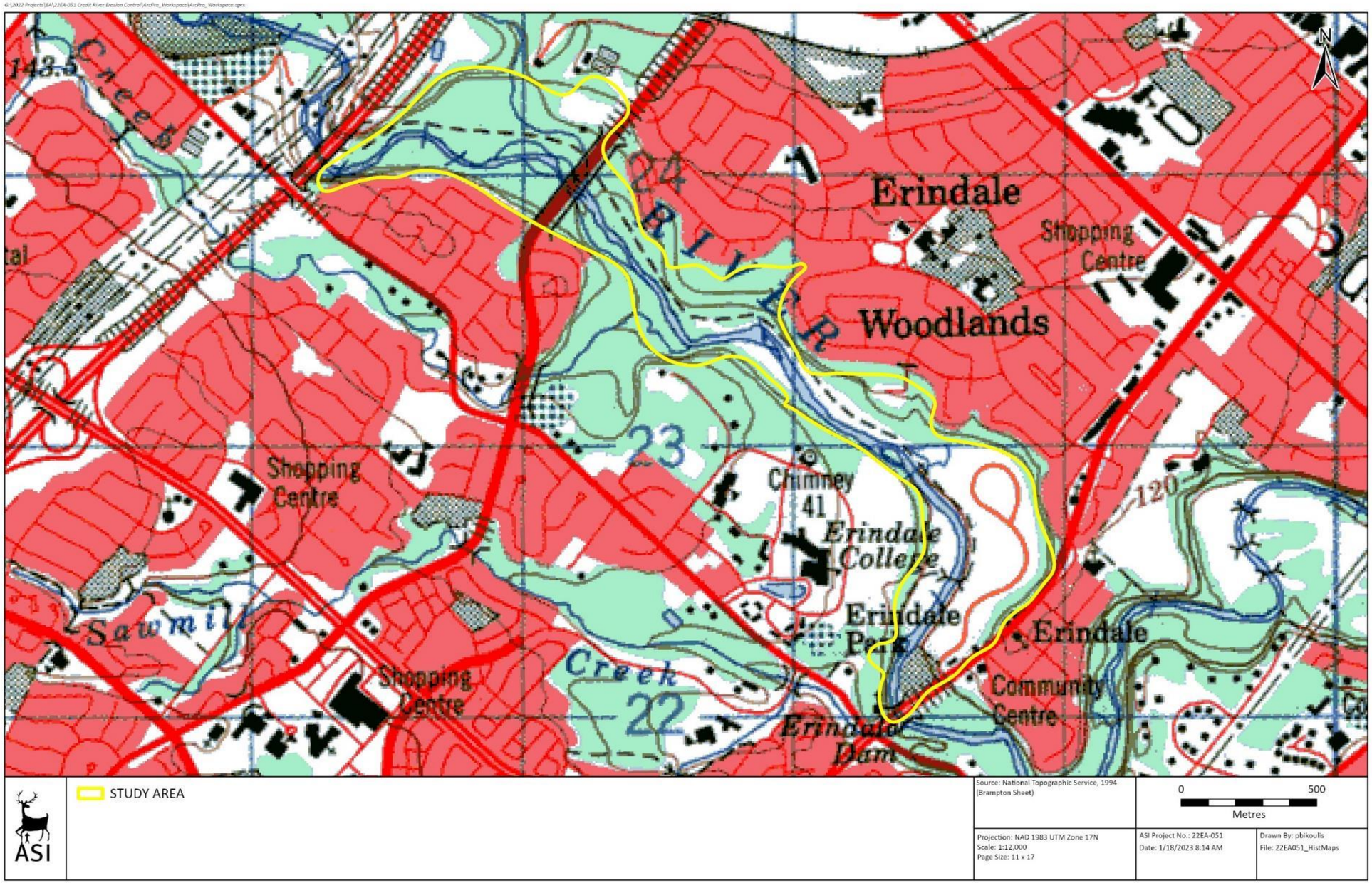


Figure 6: Study Area (Approximate Location) Overlaid on the 1994 National Topographic System Brampton Sheet

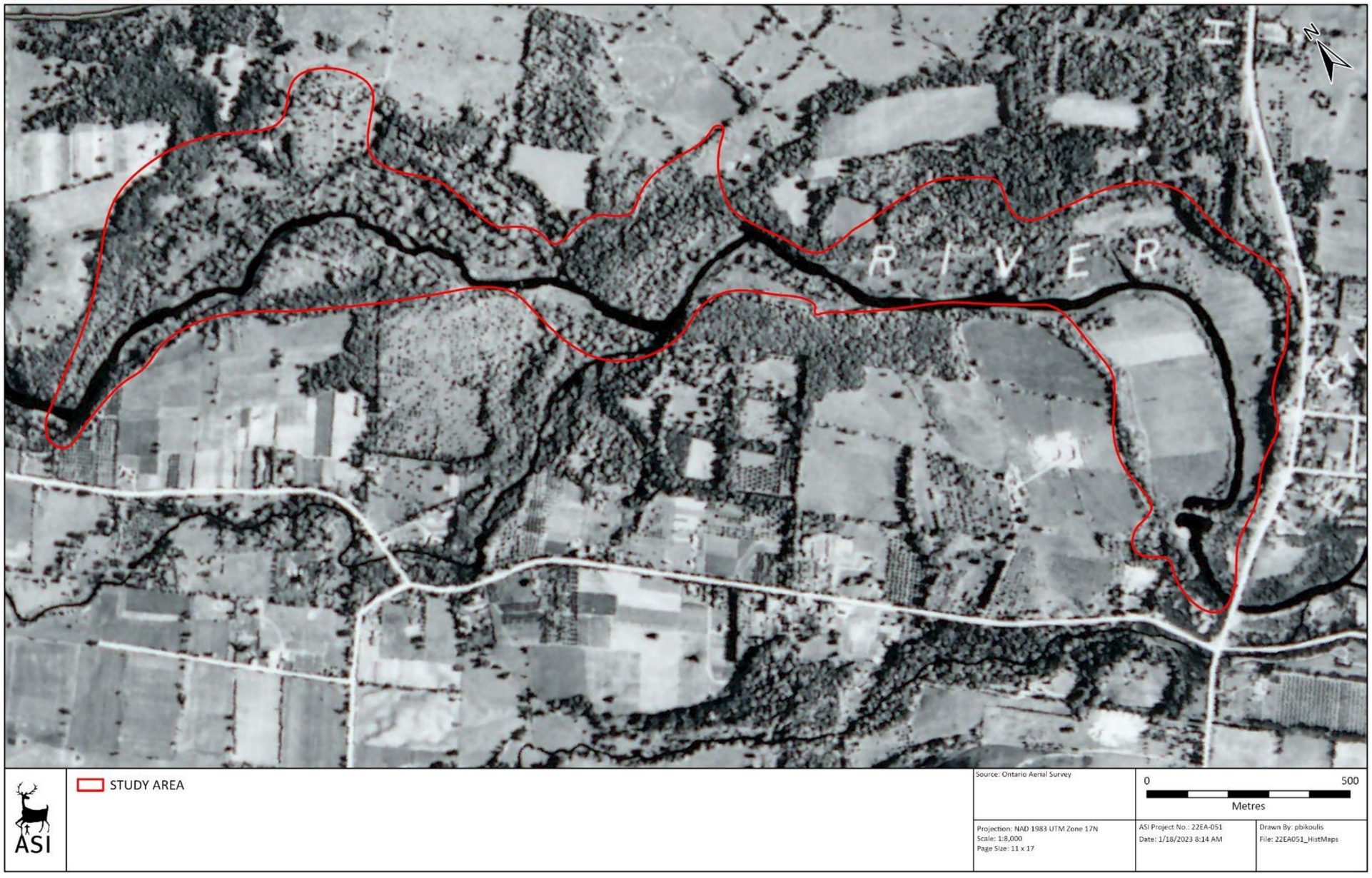


Figure 7: Study Area (Approximate Location) Overlaid on 1954 Aerial Photography

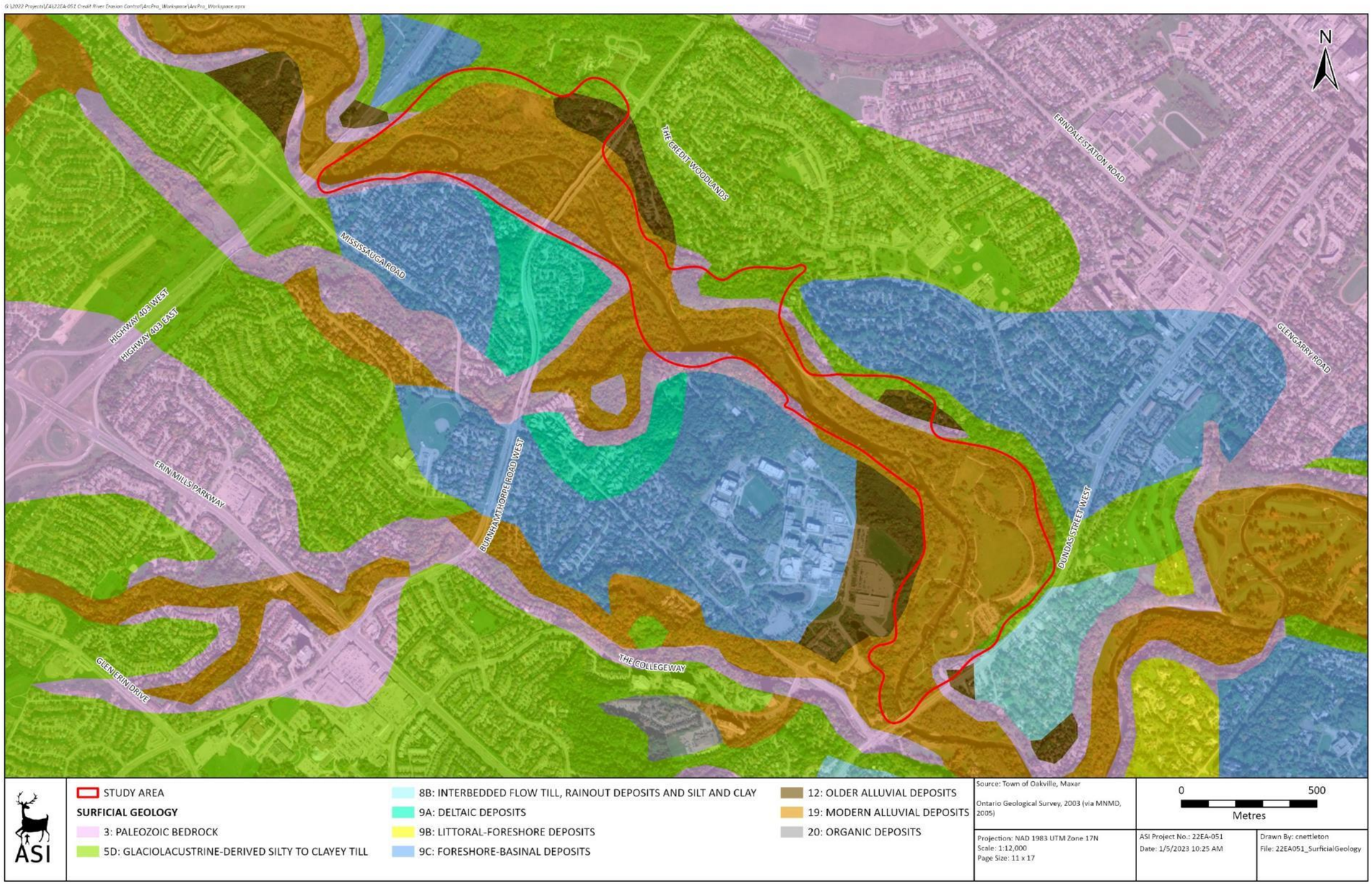


Figure 8: Study Area - Surficial Geology

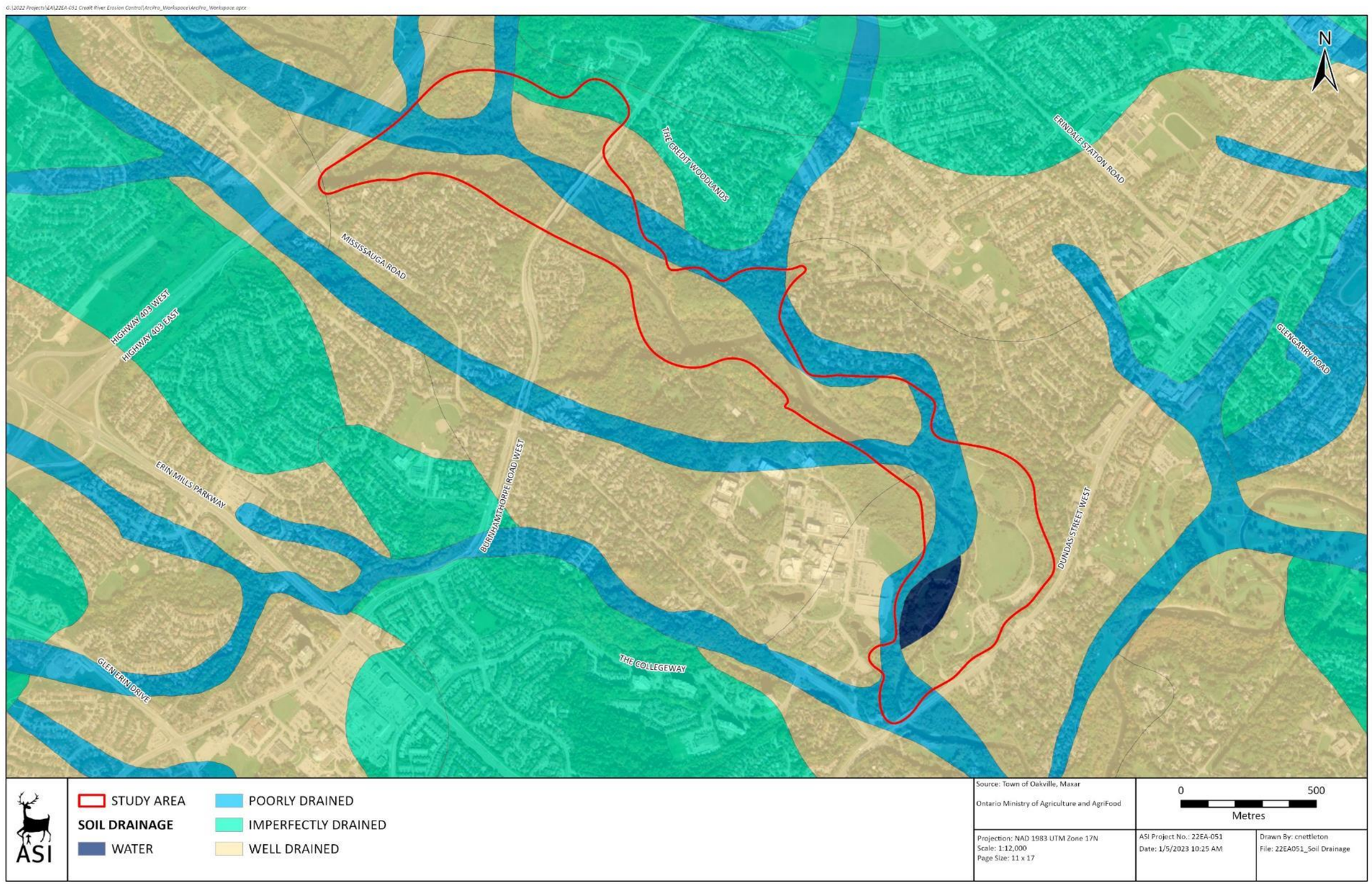


Figure 9: Study Area - Soil Drainage

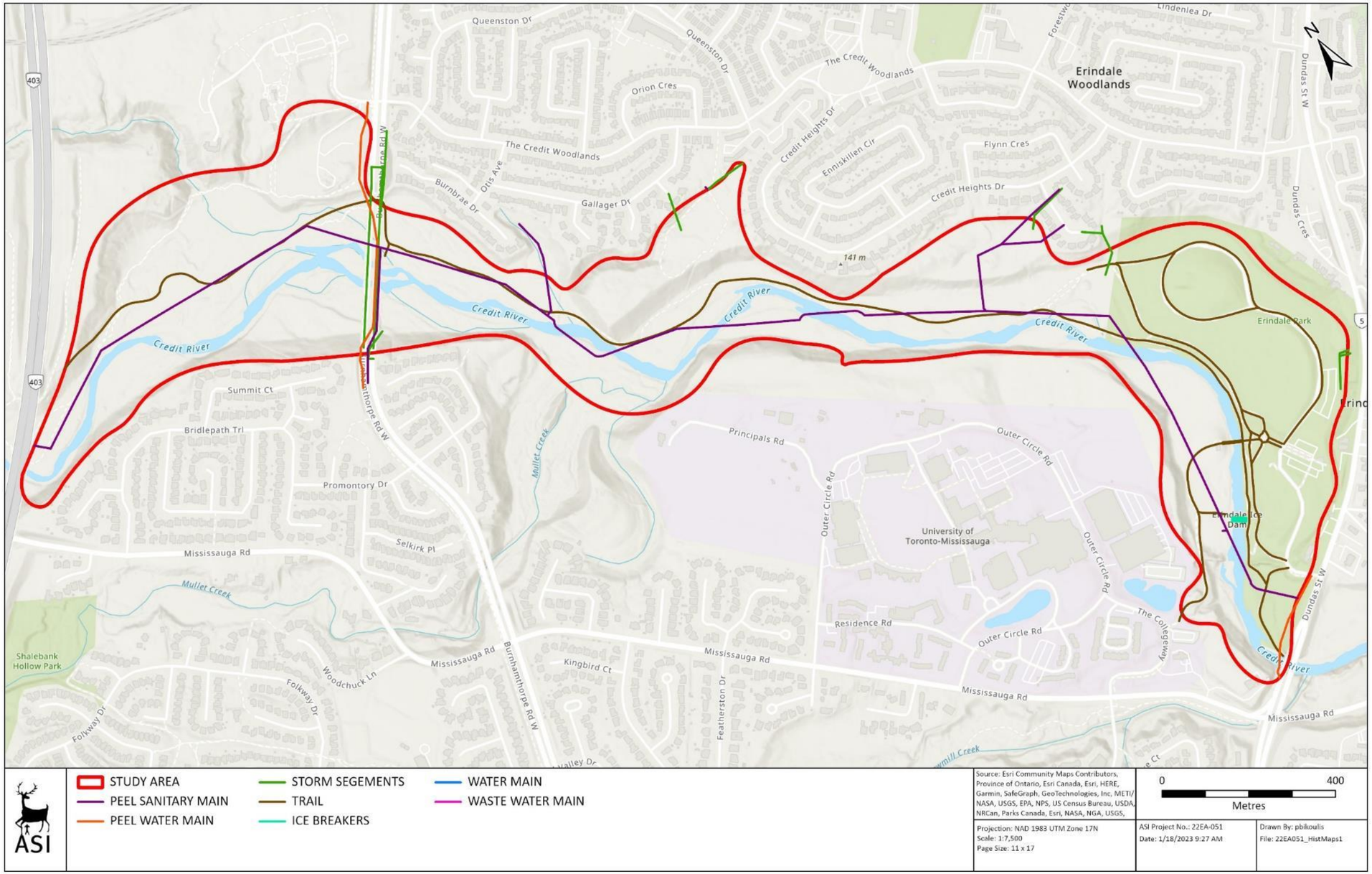


Figure 10: Study Area - Existing Conditions and Topography

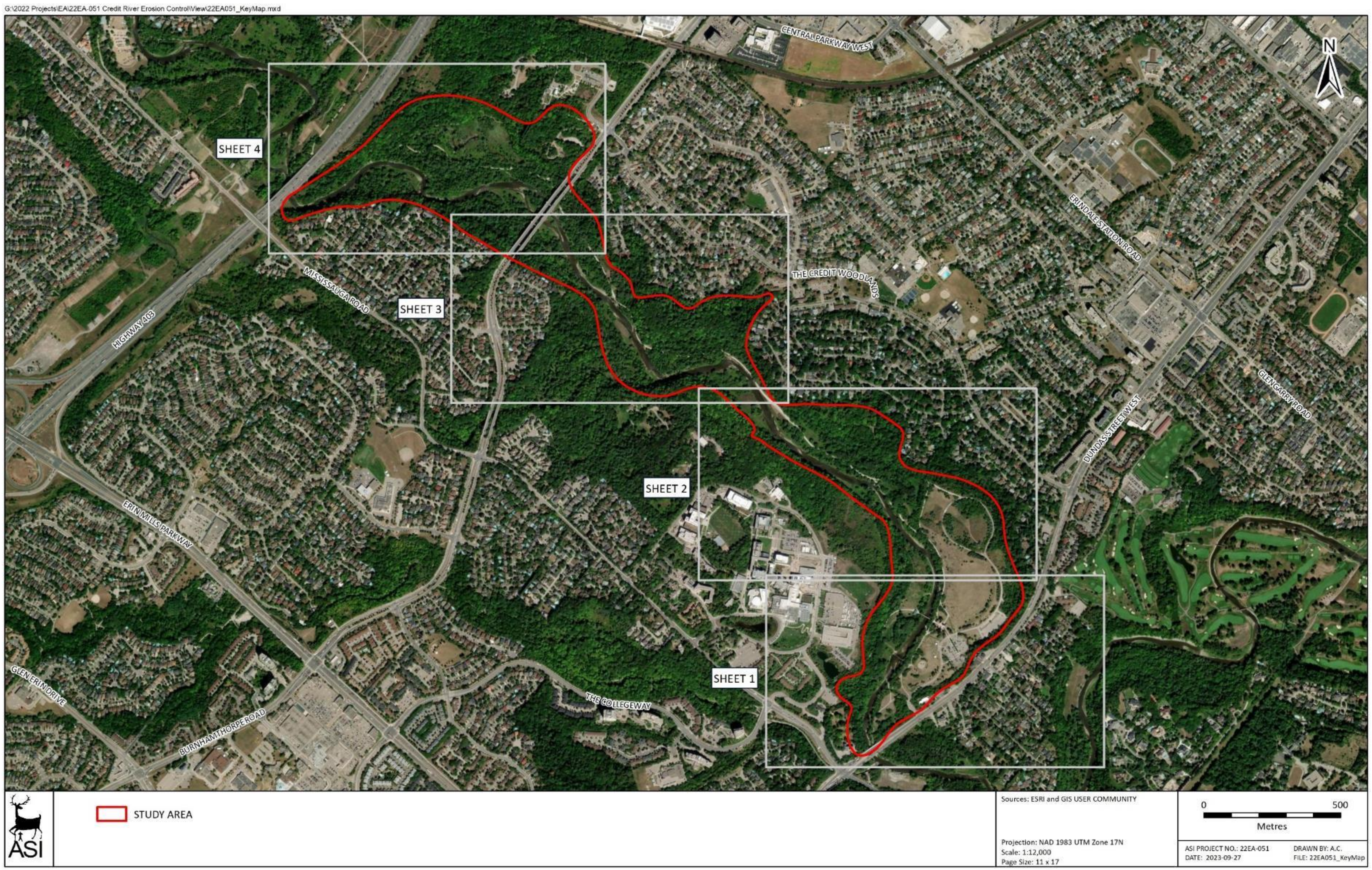


Figure 11: Credit River Erosion Control Stage 1 Study Area –Key Sheet

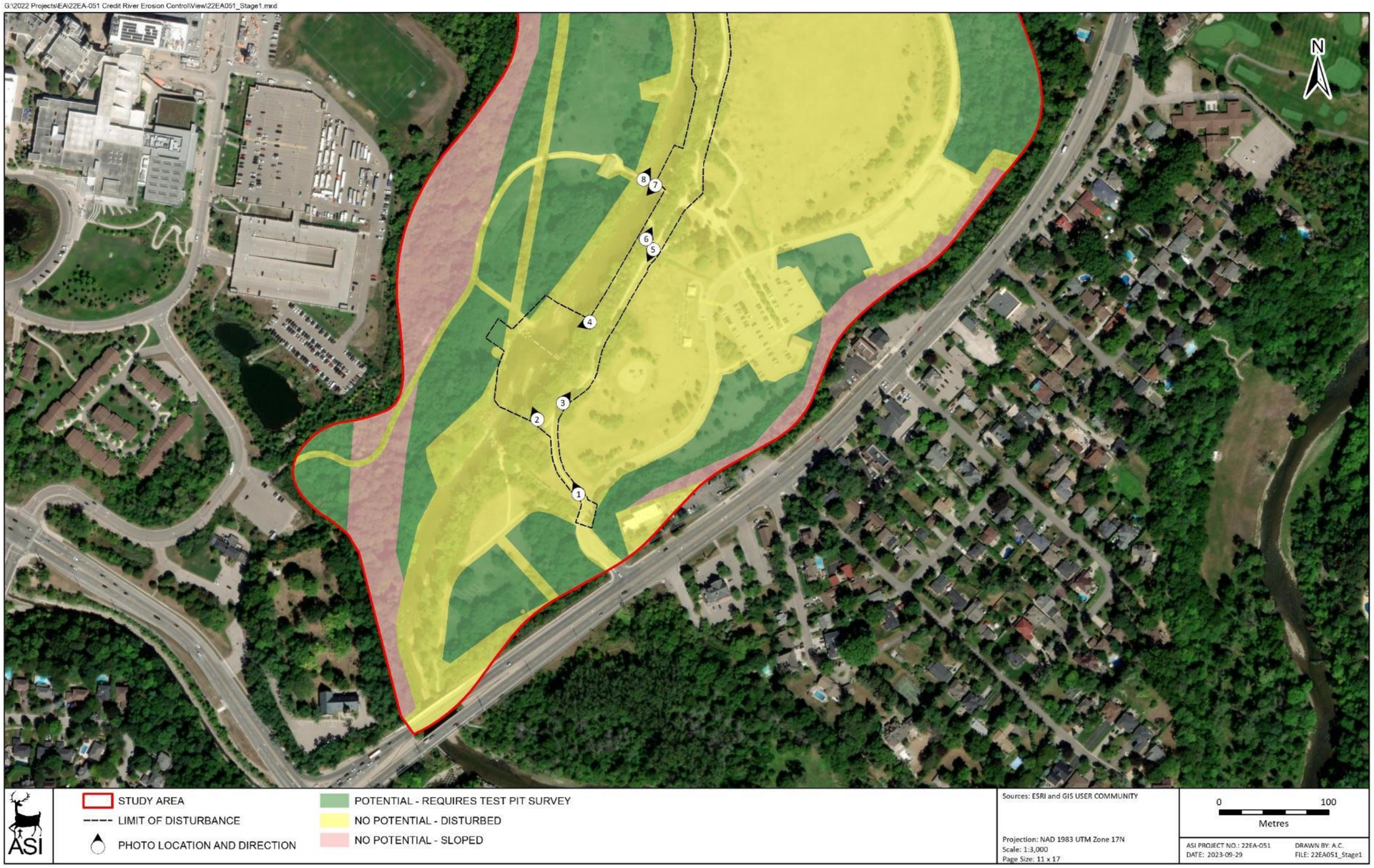


Figure 12: Credit River Erosion Control Stage 1 Study Area – Sheet 1

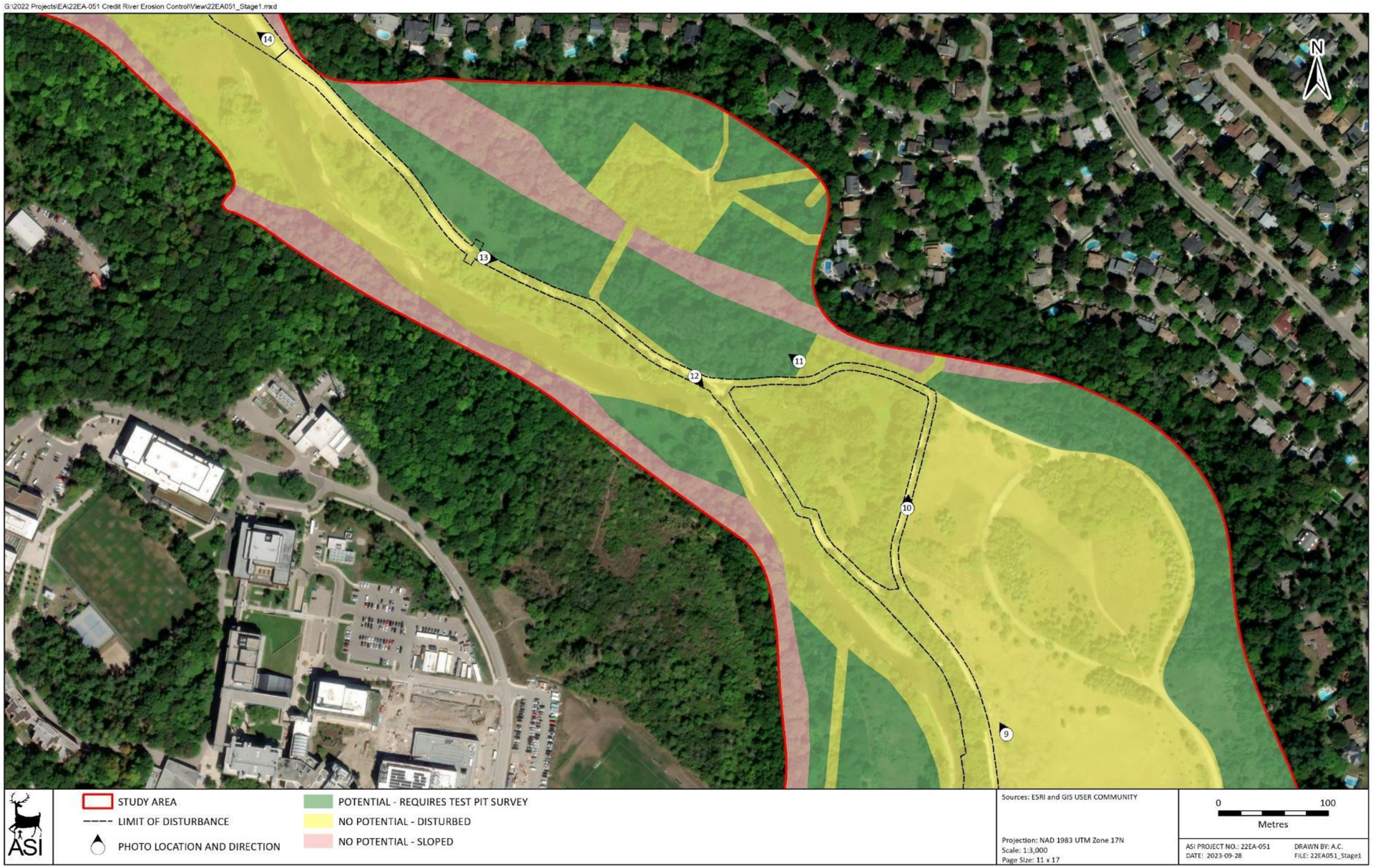


Figure 13: Credit River Erosion Control Stage 1 Study Area – Sheet 2

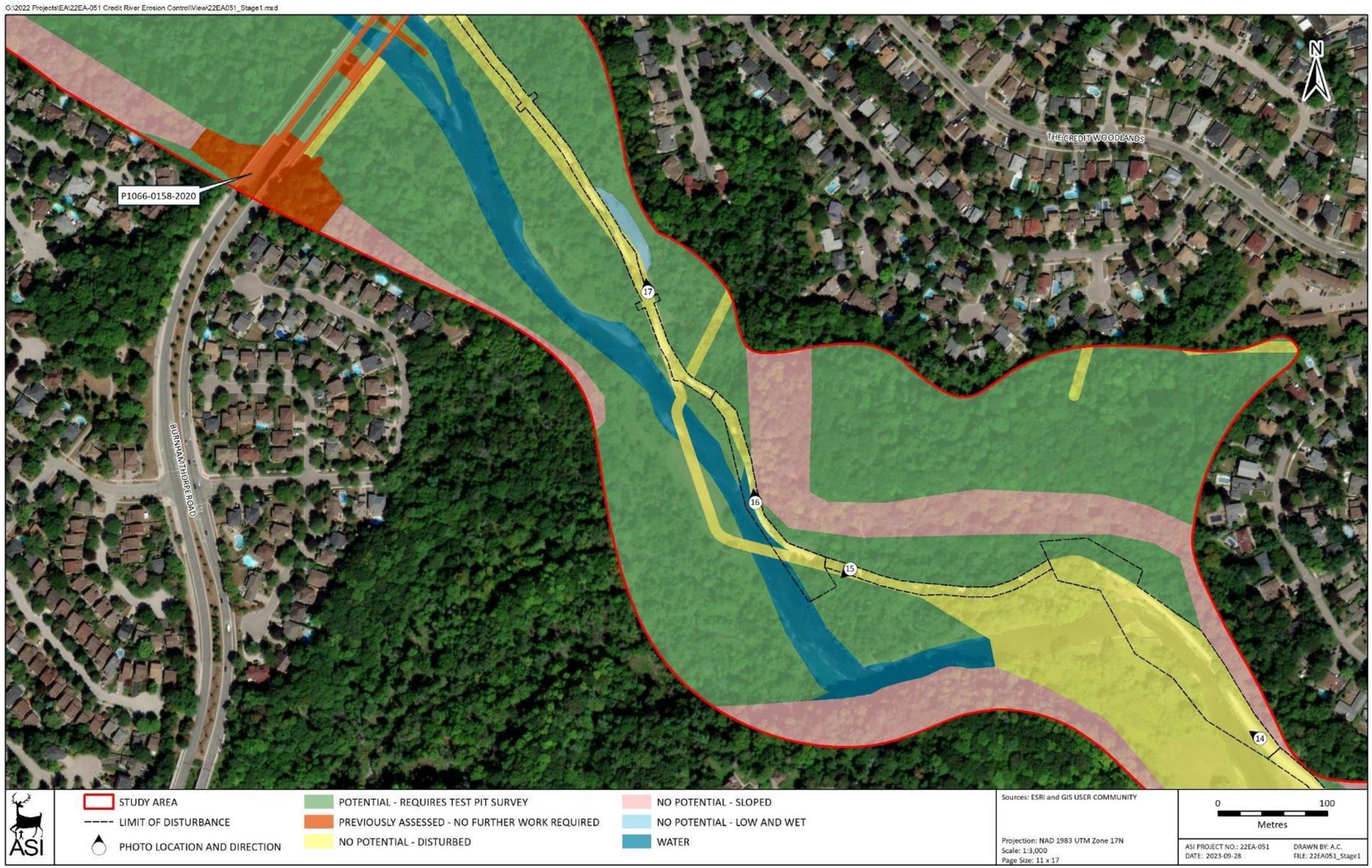


Figure 14: Credit River Erosion Control Stage 1 Study Area – Sheet 3

Figure 15: Credit River Erosion Control Stage 1 Study Area – Sheet 4

Appendix B1 – Supplemental Documentation by ASi

Stage 1 Archaeological Assessment
Credit River Erosion Control
(Various Lots and Concessions, Geographical Township of Toronto, County of Peel)
City of Mississauga, Region of Peel

Supplementary Documentation

Prepared for:

Aquafor Beech Limited
2600 Skymark Avenue
Mississauga ON L4W 5B2

Archaeological Licence: P1066 (Lytle)
PIF P1066-0374-2023
Archaeological Services Inc. File: 22EA-051

October 11, 2023

Table of Contents

1.0 Maps 3
2.0 Bibliography and Sources 9

List of Figures

Figure 1: Previously Registered Sites within One Kilometre of the Study Area (MCM 2023). 4
Figure 2: Location of AjGw-580 and AjGw-582. 5
Figure 3: Location of AjGw-534 – report currently awaiting MCM review. 6
Figure 5: Study Area and Limit of Disturbance in proximity to AjGw-580 and AjGw-582 7
Figure 4: Study Area and Limit of Disturbance in proximity to AjGw-534 8

1.0 Maps

According to Section 7.6 of the *Standards and Guidelines for Consultant Archaeologists* (S & G) administered by the Ministry of Citizenship and Multiculturism (MCM 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 MCM to exclude it from the Ontario Public Register of Archaeological Reports, if necessary. Archaeological site location information is considered by the MCM to be confidential and/or sensitive information that cannot be made public.

The following maps show the approximate location of sites within one kilometre of the Study Area, and the detailed locations of AjGw-580, AjGw-582 and AjGw-534 within 50 metres. 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, 2023).

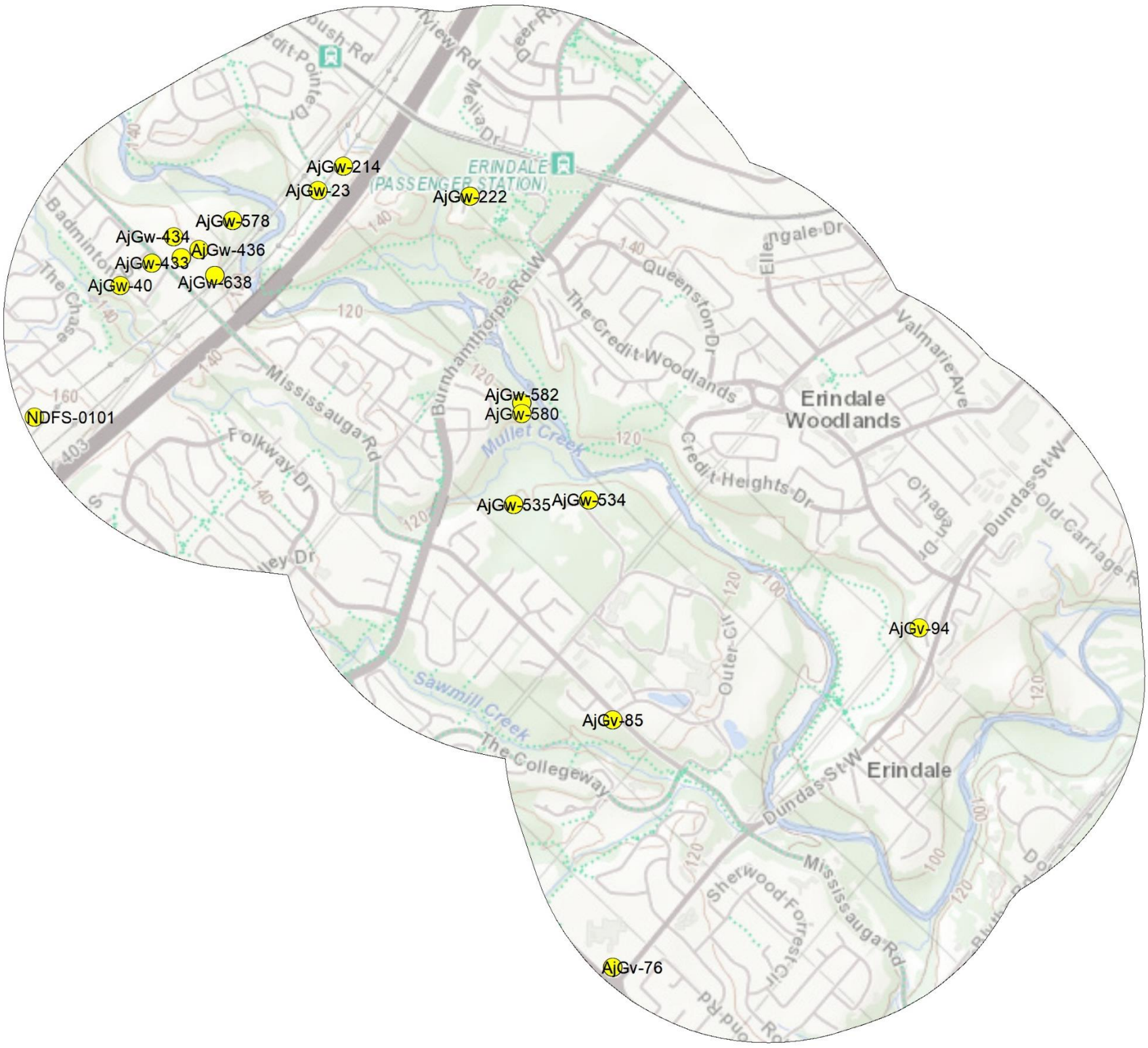
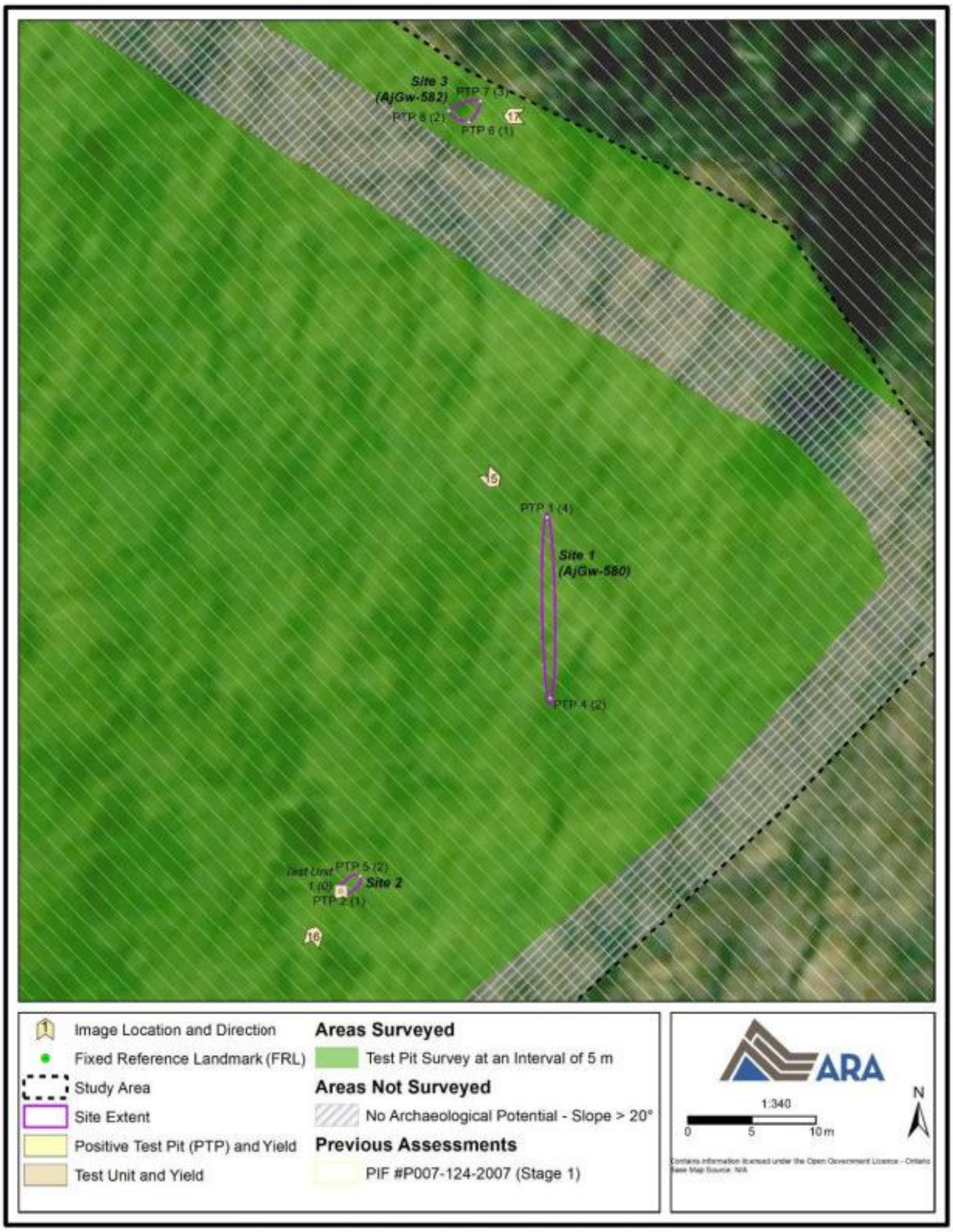


Figure 1: Previously Registered Sites within One Kilometre of the Study Area (MCM 2023).



SD Map 2: Sites 1–3 (Stage 2) – Total Yields
(Produced under licence using ArcGIS® software by Esri, © Esri)

Figure 2: Location of AjGw-580 and AjGw-582.

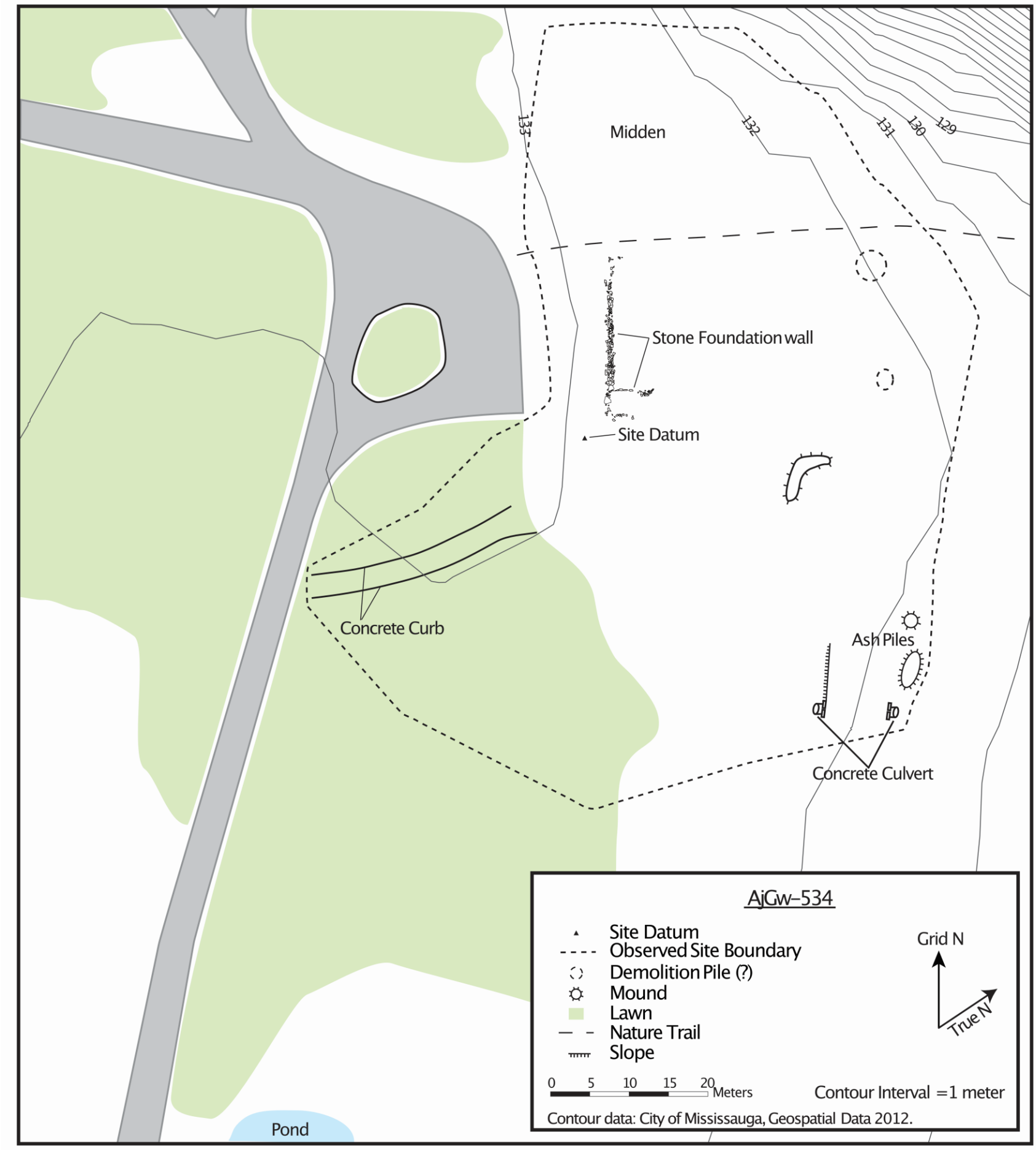


Figure 3: Location of AjGw-534 – report currently awaiting MCM review.

Figure 4: Study Area and Limit of Disturbance in proximity to AjGw-580 and AjGw-582

Figure 5: Study Area and Limit of Disturbance in proximity to AjGw-534

2.0 Bibliography and Sources

ASI, (Archaeological Services Inc.). (2023). Stage 1 Archaeological Assessment, Credit River Erosion Control, (Various Lots and Concessions, Geographical Township of Toronto, County of Peel), City of Mississauga, Region of Peel.

Ministry of Citizenship and Multiculturalism. (2023). Ontario's PastPortal. PastPortal. https://www.pastport.mtc.gov.on.ca

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