

APPENDIX B

Archeological Report

Ministry of Tourism, Culture and Sport

Archaeology Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel.: (416) 212-8442
Email: John.Dunlop@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes d'archéologie
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Tél. : (416) 212-8442
Email: John.Dunlop@ontario.ca



May 3, 2017

Nimal Nithiyantham (P390)
Archeoworks Inc.
1029 - 16715-12 Yonge Newmarket ON L3X 1X4

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1 Archaeological Assessment for the Don Mills Channel Flood Reduction EA, Within Part of Lots 1 to 5, Concession 3, and Lots 1 to 4, Concession 4, In the Geographic Township of Markham, Historical County of York, City of Markham, Regional Municipality of York, Ontario.", Dated Feb 2, 2017, Filed with MTCS Toronto Office on Feb 10, 2017, MTCS Project Information Form Number P390-0175-2016, MTCS File Number 0004206

Dear Mr. Nithiyantham:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Map 9 of the above titled report and recommends the following:

In light of the findings detailed in preceding sections, the following recommendations are presented:

1. As per Section 1.4.1, Standard 1.f. and Section 1.4.2, Standard 1 of the 2011 S&G, areas that exhibit disturbed conditions are recommended to be exempt from a Stage 2 AA.
2. All identified areas retaining archaeological potential must be subjected to a Stage 2 AA. Given the presence of overgrown vegetation, trees and urban location of the study area, ploughing in advance of Stage 2 pedestrian survey will not be possible, therefore these areas will need to be subjected to a Stage 2 shovel test pit archaeological survey in accordance with Section 2.1.2 of the 2011 S&G.

No excavation activities shall take place within the study area prior to the MTCS (Archaeology Program Unit) confirming in writing that all archaeological licensing and technical review requirements have been

satisfied.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

John Dunlop
Archaeology Review Officer

cc. Archaeology Licensing Officer
Steve Hollingworth, TMIG
Rob Grech, City of Markham

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

ARCHEOWORKS INC.

**Stage 1 Archaeological Assessment for the
Don Mills Channel Flood Reduction EA
Within Part of Lots 1 to 5, Concession 3, and
Lots 1 to 4, Concession 4
In the Geographic Township of Markham
Historical County of York
City of Markham
Regional Municipality of York
Ontario**

**Project #: 007-MA1564-15
Licensee (#): Nimal Nithiyantham (P390)
PIF#: P390-0175-2016**

Original Report

March 24th, 2016

Presented to:

TMIG | The Municipal Infrastructure Group Ltd.

8800 Dufferin Street, Suite 200

Vaughan, Ontario

L4K 0C5

T: 905.738.5700

F: 905.738.0065

Prepared by:

Archeoworks Inc.

16715-12 Yonge Street, Suite 1029

Newmarket, Ontario

L3X 1X4

T: 416.676.5597

F: 647.436.1938

EXECUTIVE SUMMARY

Archeoworks Inc. was retained by *The Municipal Infrastructure Group Limited* to conduct a Stage 1 Archaeological Assessment (AA) in support of the Don Mills Channel Flood Reduction Municipal Class Environmental Assessment (Class EA). The study area is roughly bounded by: Highway 404 to the west; the rail line just north of John Street to the north, Victoria Park Avenue to the east, and Steeles Avenue to the south. The study area encompasses part of Lots 1 to 5, Concession 3, and Lots 1 to 4, Concession 4 in the Geographic Township of Markham, historical County of York, City of Markham, Regional Municipality of York, Ontario.

The Stage 1 background research identified elevated archaeological potential for the recovery of Aboriginal and Euro-Canadian archaeological remains within portions of the study area due to the close proximity of the following features contributing to archaeological potential: historic transportation routes; historic structures; a previously registered archaeological site and a primary hydrological resource. However, according to the York Region archaeological management plan, only a small portion within the northern part of the study area retains archaeological potential, due to existing disturbances within the remainder of the subject lands (York Region Maps, 2016). Disturbances were confirmed through a detailed review of historical maps and historical aerial/satellite imagery which revealed the study area has undergone extensive changes since 1954. A property inspection further verified the specific disturbances within the study area, including extant structures, roadways, driveways, parking lots, sidewalks, utilities, rail lines, grading and extensive landscaping. Archaeological potential was nevertheless determined to still exist for two small segments within the northern portion of the study area; these lands corresponding to a manicured grassed field and an area of overgrown vegetation and trees and also corresponding to the archaeological potential areas illustrated in the York Region archaeological management plan.

In conclusion, following a collective review of all data, the resulting recommendations are presented:

1. As per *Section 1.4.1, Standard 1.f.* and *Section 1.4.2, Standard 1* of the *2011 S&G*, areas that exhibit disturbed conditions are recommended to be exempt from a Stage 2 AA.
2. All identified areas retaining archaeological potential must be subjected to a Stage 2 AA. These areas will need to be subjected to a Stage 2 shovel test pit archaeological survey in accordance with *Section 2.1.2* of the *2011 S&G*.

No excavation activities shall take place within the study area prior to the *Ministry of Tourism, Culture and Sport* (Archaeology Program Unit) confirming in writing that all archaeological licensing and technical review requirements have been satisfied.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
TABLE OF CONTENTS	II
PROJECT PERSONNEL	IV
1.0 PROJECT CONTEXT	1
1.1 OBJECTIVE	1
1.2 DEVELOPMENT CONTEXT	1
1.3 HISTORICAL CONTEXT	2
1.4 ARCHAEOLOGICAL CONTEXT	12
1.5 CONFIRMATION OF ARCHAEOLOGICAL POTENTIAL	17
2.0 PROPERTY INSPECTION	18
2.1 CONFIRMATION OF PREVIOUSLY IDENTIFIED FEATURES OF ARCHAEOLOGICAL POTENTIAL	18
2.2 IDENTIFICATION AND DOCUMENTATION OF ADDITIONAL FEATURES OF ARCHAEOLOGICAL POTENTIAL.....	18
2.3 IDENTIFICATION AND DOCUMENTATION OF FEATURES THAT WILL AFFECT ASSESSMENT STRATEGIES	18
2.4 IDENTIFICATION AND DOCUMENTATION OF STRUCTURES AND BUILT FEATURES THAT WILL AFFECT ASSESSMENT STRATEGIES	18
3.0 ANALYSIS AND CONCLUSIONS	19
3.1 HISTORICAL IMAGERY.....	19
3.2 IDENTIFIED DEEP AND EXTENSIVE DISTURBANCES	19
3.3 IDENTIFIED AREAS OF ARCHAEOLOGICAL POTENTIAL	19
4.0 RECOMMENDATIONS	20
5.0 ADVICE ON COMPLIANCE WITH LEGISLATION	21
6.0 BIBLIOGRAPHY AND SOURCES	22
APPENDICES	28
APPENDIX A: MAPS	29
APPENDIX B: SUMMARY OF BACKGROUND RESEARCH	38
APPENDIX C: IMAGES.....	39
APPENDIX D: INVENTORY OF DOCUMENTARY AND MATERIAL RECORD.....	43
APPENDIX E: CHANGES SINCE PIF SUBMISSION	44

LIST OF TABLES

TABLE 1: HISTORICAL STRUCTURES WITHIN THE STUDY AREA 11

TABLE 2: REGISTERED ARCHAEOLOGICAL SITES WITHIN ONE-KILOMETRE OF THE STUDY AREA 13

TABLE 3: HISTORY OF OCCUPATION IN SOUTHERN ONTARIO 14

TABLE 4: PREVIOUS ARCHAEOLOGICAL ASSESSMENTS 15

TABLE 5: STUDY AREA SOIL TYPES..... 16

DRAFT

PROJECT PERSONNEL

Project Director..... Nimal Nithiyantham – MTCS licence P390

Field Director..... Alvina Tam – MTCS licence P1016

Report Preparation Alvina Tam – MTCS licence P1016

Report Review..... Nimal Nithiyantham – MTCS licence P390

Historical Research..... Lee Templeton – MTCS licence R454

Graphics Alvina Tam – MTCS licence P1016
Lee Templeton – MTCS licence R454

DRAFT

1.0 PROJECT CONTEXT

1.1 Objective

The objectives of a Stage 1 Archaeological Assessment (AA), as outlined by the 2011 *Standards and Guidelines for Consultant Archaeologists* ('2011 S&G') (2011), are as follows:

- To provide information about the property's geography, history, previous archaeological fieldwork and current land condition;
- To evaluate in detail, the property's archaeological potential, which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

1.2 Development Context

Archeoworks Inc. was retained by *The Municipal Infrastructure Group Limited* to conduct a Stage 1 AA in support of the Don Mills Channel Flood Reduction Municipal Class Environmental Assessment (Class EA). This project will determine the best means of reducing flooding along the Don Mills Channel. The study area is roughly bounded by: Highway 404 to the west; the rail line just north of John Street to the north, Victoria Park Avenue to the east, and Steeles Avenue to the south. The study area encompasses part of Lots 1 to 5, Concession 3, and Lots 1 to 4, Concession 4 in the Geographic Township of Markham, historical County of York, City of Markham, Regional Municipality of York, Ontario (*see Appendix A – Map 1*).

The Regional Municipality of York (or York Region) has an archaeological management plan (AMP), founded on the principles of archaeological potential modeling, and developed using a Geographic Information System (GIS) (York Maps, 2015). Archaeological site potential modeling incorporates a variety of sources, such as history, human geography, settlement archaeology, ecological archaeology, and paleoecology, in an attempt to reconstruct past land use patterns. Some major limiting factors of the predictive model, especially with regard to predicting pre-contact site locations, include: the scantiness of systematic archaeological survey within a few areas of the city; limited knowledge of the pre-contact natural environment; and a substantively different world view from pre-contact Aboriginal people, who may have situated within places for intangible reasons (i.e., ideological or aesthetic) that would be impossible to understand or predict within the economically based parameters of this spatial analysis (ASI, 2014). According to the York Region AMP, only a small portion within the northern part of the study area retains archaeological potential (York Region Maps, 2016) (*see Map 2*).

This project is being conducted in accordance with Schedule B of the Municipal Class EA process under the Ontario EA Act. The Stage 1 AA was conducted under the project direction of Mr. Nimal Nithiyantham, under archaeological consultant licence P390, in accordance with the *Ontario*

Heritage Act (2009). Permission to investigate the study area was provided by *The Municipal Infrastructure Group Limited* on November 19th, 2016.

1.3 Historical Context

The 2011 *S&G*, published by the *Ministry of Tourism, Culture and Sport (MTCS)* considers areas of early Euro-Canadian settlement, including places of early military pioneer or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes), early wharf or dock complexes, and pioneer churches and early cemeteries, as having archaeological potential. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed in a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site, and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations are also considered to have archaeological potential.

To establish the archaeological and historical significance of the study area, *Archeoworks Inc.* conducted a comprehensive review of the York Region AMP, Aboriginal and Euro-Canadian settlement history, the designated and listed heritage properties, commemorative markers as well as consulted with available historical mapping. Furthermore, an examination of the registered archaeological sites and previous archaeological assessments within close proximity to its limits, and review of the physiography of the overall area and its correlation to locating archaeological remains was performed.

The results of this background research are documented below and summarized in **Appendix B – Summary of Background Research.**

1.3.1 Pre-Contact Period

1.3.1.1 *The Paleoindian Period (ca. 11 b4500 to 7500 B.C.)*

The region in which the study area is situated was first inhabited after the final retreat of the North American Laurentide ice sheet 15,000 years ago (or 13 000 B.C.) (Stewart, 2013, p.24). Initial vegetation of the majority of Southern Ontario was tundra-like. As the average climatic temperature began to warm, small groups of Paleoindians entered Southern Ontario (Karrow and Warner, 1990, p.22; Stewart, 2013, p.28). Generally, Paleoindians are thought to have been small groups of nomadic hunter-gatherers who depended on naturally available foodstuffs such as game or wild plants (Ellis and Deller, 1990, p.38). For much of the year, Paleoindians “hunted in small family groups; these would periodically gather into a larger grouping or bands during a favourable period in their hunting cycle, such as the annual caribou migration” (Wright, 1994, p.25).

Paleoindian sites are extraordinarily rare and consist of “stone tools clustered in an area of less than 200-300 metres” (Ellis, 2013, p.35). These sites appear to have been campsites used during

travel episodes and can be found on well-drained soils in elevated situations, which would have provided a more comfortable location in which to camp and view the surrounding territory (Ellis and Deller, 1990, p.50). Traditionally, Paleoindian sites have been located primarily along abandoned glacial lake strandlines or beaches. However, this view is biased as these are only areas in which archaeologists have searched for sites, due to the current understanding of the region's geological history (Ellis and Deller, 1990, p.50; Ellis, 2013, p.37). In areas where attention has been paid to non-strandline areas and to older strandlines, sites are much less concentrated and more ephemeral (Ellis and Deller, 1990, p.51).

Artifact assemblages from this period are characterized by fluted and lanceolate stone points, scrapers, and small projectile points produced from specific chert types (Ellis and Deller, 1990). Distinctive dart heads were used to kill game, and knives were used for butchering and other tasks (Wright, 1994, p.24). These items were created and transported over great distances while following migratory animals within a massive territory.

1.3.1.2 The Archaic Period (ca. 7800 to 500 B.C.)

As the climate continued to warm, deciduous trees slowly began to permeate throughout Southern Ontario, creating mixed deciduous and coniferous forests (Karrow and Warner, 1990, p.30). The "Archaic peoples are the direct descendants of Paleoindian ancestors" having adapted to meet new environmental and social conditions (Ellis, 2013, p.41; Wright, 1994, p.25). The Archaic period is divided chronologically and cultural groups are divided geographically and sequentially. Archaic Aboriginals lived in "hunter-gatherer bands whose social and economic organization was probably characterized by openness and flexibility" (Ellis et al., 1990, p.123). This fluidity created 'traditions' and 'phases' which encompasses large groups of Archaic Aboriginals (Ellis et al., 1990, p.123).

Few Archaic sites have faunal and floral preservation; hence lithic scatters are often the most common Archaic Aboriginal site type (Ellis et al., 1990, p.123). House structures have "left no trace" due to the high acidic content of Ontario soils (Wright, 1994, p.27). Burial/grave goods and ritual items appear, although very rarely. By the Late Archaic, multiple individuals were interred together suggesting semi-permanent communities were in existence (Ellis, 2013, p.46). Ceremonial and decorative items also appear on Archaic Aboriginal sites through widespread trade networks, such as conch shells from the Atlantic coast and galena from New York (Ellis, 2013, p.41). Through trade with the northern Archaic Aboriginals situated around Lake Superior, native copper was initially utilized to make hooks and knives but gradually became used for decorative and ritual items (Ellis, 2013, p.42).

During the Archaic period, stone points were reformed from fluted and lanceolate points to stone points with notched bases to be attached to a wooden shaft (Ellis, 2013, p.41). The artifact assemblages from this period are characterized by a reliance on a wide range of raw lithic materials in order to make stone artifacts, the presence of stone tools shaped by grinding and polishing, and an increase in the use of polished stone axes and adzes as wood-working tools (Ellis et al., 1990, p.65; Wright, 1994, p.26). Ground-stone tools were also produced from hard

stones and reformed into tools and throwing weapons (Ellis, 2013, p.41). The bow and arrow was first used during the Archaic period (Ellis, 2013, p.42).

1.3.1.3 The Early Woodland Period (ca. 800 to 0 B.C.)

Early Woodland cultures evolved out of the Late Archaic period (Ferris and Spence, 1995, p.89; Spence et al., 1990, p.168). The Early Woodland period is divided into two complexes: the Meadowood complex and the Middlesex complex. The Middlesex complex appears to be restricted to Eastern Ontario, particularly along the St. Lawrence River while Meadowood materials depict a broad extent of occupation in southwestern Ontario (Spence et al., 1990, p.134, 141). The distinguishing characteristic of the Early Woodland period is the introduction of pottery (ceramics). The earliest forms were coil-formed, “thick, friable and often under fired, and must have been only limited to utility usage” (Ferris and Spence, 1995, p.89; Williamson, 2013, p.48).

Cache Blades, a formal chipped stone technology, and side-notched Meadowood points, were commonly employed tools that were often recycled into a number of other tool forms such as end scrapers (Spence et al., 1990, p.128; Ferris and Spence, 1995, p.93). These tools were primarily formed from Onondaga chert (Spence et al., 1990, p.128). Meadowood sites have produced a distinctive material culture that functioned in both domestic and ritual spheres (Ferris and Spence, 1995, p.90; Spence et al., 1990, p.128). This allows correlations to be made between habitations and mortuary sites, creating a well-rounded view of Meadowood culture (Ferris and Spence, 1995, p.90; Spence et al., 1990, p.128). However, their settlement-subsistence system is poorly understood as only a “few settlement types have been adequately investigated, and not all of these are from the same physiographic regions” (Ferris and Spence, 1995, p.93; Spence et al., 1990, p.136). Generally, Meadowood sites are in association with the Point Peninsula and Saugeen complexes which, “then eventually changed or were absorbed into the Point Peninsula complex” (Wright, 1994, pp.29-30).

1.3.1.4 The Middle Woodland Period (ca. 200 B.C. to 900 A.D.)

During the Middle Woodland period, three primary cultural complexes developed in Southern Ontario. The Couture complex was located in the southwestern-most part of Ontario (Spence et al., 1990, p.143). The Point Peninsula complex was “distributed throughout south-central and eastern Southern Ontario, the southern margins of the Canadian Shield, the St. Lawrence River down river to Quebec City, most of southeastern Quebec, along the Richelieu River into Lake Champlain” (Spence et al., 1990, p.157; Wright, 1999, p.633). The Saugeen complex occupied “southwestern Southern Ontario from the Bruce Peninsula on Georgian Bay to the north shore of Lake Erie to the west of Toronto” (Wright, 1999, p.629; Wright, 1994, p.30).

The Saugeen and Point Peninsula cultures appear to have shared Southern Ontario but the borders between these three cultural complexes are not well defined, and many academics believe that the Niagara Escarpment formed a frontier between the Saugeen complex and the Point Peninsula complex (Spence et al., 1990, p.143; Wright, 1999, p.629; Ferris and Spence, 1995, p.98). Consequently, the dynamics of hunter-gatherer societies shifted territorial boundaries resulting in regional clusters throughout southwestern Ontario that have been

variously assigned to Saugeen, Point Peninsula, or independent complexes (Spence et al., 1990, p.148; Wright, 1999, p.649).

Middle Woodland pottery share a preference for stamped, scallop-edged, or tooth-like decoration, but each cultural complex had distinct pottery forms (such as globular pots), finishes, and zones of decoration (Williamson, 2014, p.49; Ferris and Spence, 1995, p.97; Spence et al., 1990, p.143). Major changes in settlement-subsistence systems occurred during the Middle Woodland period, particularly the introduction of large 'house' structures and substantial middens associated with these structures (Spence et al., 1990, p.167; Ferris and Spence, 1995, p.99). The larger sites likely indicate a prolonged period of macroband settlement and a more consistent return to the same site, rather than an increase in band size (Spence et al., 1990, p.168). Environmental constraints in different parts of Southern Ontario all produced a common implication of increased sedentism caused by the intensified exploitation of local resources (Ferris and Spence, 1995, p.100). Burial offerings became more ornate and encompassed many material mediums, including antler, whetstones, copper, and pan pipes (Ferris and Spence, 1995, p.99). Burial sites during this time were set away from occupation sites and remains were interred at time of death; secondary burials were not common (Ferris and Spence, 1995, p.101). Small numbers of burial mounds are present, particularly around Rice Lake, and both exotic and utilitarian items were left as grave goods (Williamson, 2013, p.51; Ferris and Spence, 1995, p.102).

1.3.1.5 The Late Woodland Period (ca. A.D. 900 to 1600)

During the Late Woodland Period (A.D. 900-1600), multiple sub-stages, and complexes have been assigned, which are divided spatially and chronologically (Fox, 1990; Williamson, 1990; Dodd et al., 1990; Warrick, 2000). Although several migration theories have been suggested explaining the Iroquoian origins, an "available date from Southern Ontario strongly suggests continuity (*in situ*) from the Middle-Late Woodland Transitional Princess Point complex and Late Woodland cultural groups" (Ferris and Spence, 1995, p. 105; Smith, 1990, p.283).

1.3.1.6 The Early Ontario Iroquois Stage (ca. A.D. 900 to 1300)

Two primary cultural groups have been assigned to the Early Ontario Iroquois Period and were located in Southern Ontario. The Glen Meyer cultural group was located primarily in southwestern Ontario, whose territory "encompassed a portion of southwestern Ontario extending from Long Point on the north shore of Lake Erie to the southeastern shore of Lake Huron" (Williamson, 1990, p.304). The Pickering cultural group is "thought to be much larger encompassing the entire region north of Lake Ontario to Georgian Bay and Lake Nipissing" (Williamson, 1990, p.304). Regional clusters of these groups appear within riverine or lacustrine environments with a preference for sandy soils.

The material culture of Early Iroquois consisted of well-made and thin-walled clay vessels that were more globular in shape with rounded bottoms. These vessels were produced by modelling rather than coil-formed. Decorative stamping, incising, and punctuating along the exterior and interior rim region of the vessels were favoured. Material cultural remains also included crudely made smoking pipes, gaming discs, triangular-shaped, concave projectile chert points, and

worked bone and antlers. House structures gradually became larger, longer, and wider but variations depended on settlement type and season of occupation. Subsistence patterns indicate a quick adoption of a greater variety of harvest products. Burial practices during this period indicate an evolution to the ossuary burials; however burial patterns are still not well understood (Williamson, 1990, pp.304-311).

1.3.1.7 The Middle Ontario Iroquois Stage (ca. A.D. 1300 to 1400)

The Middle Ontario Iroquois began “with the fusion of [Glen Meyer and Pickering] caused by the conquest and absorption of Glen Meyer by Pickering” (Dodd et al., 1990, p.321). This fusion resulted in two cultural horizons located throughout most of Southern Ontario and lasting approximately 100 years. Within these 100 years, two cultural groups were present and divided chronologically into two 50-year timespans: the Uren sub-stage (1300-1350 A.D.) and the Middleport sub-stage (1350-1400 A.D.). The chronology of this stage has been contested and reflects a probable overlap with earlier stages. It is theorized that the Uren sub-stage represents a fusion of Glen Meyer and Pickering branches of the Early Ontario Iroquois while the Middleport sub-stage gave rise to the Huron, Petun, Neutral groups of the Late Ontario Iroquois stage (Dodd et al., 1990, pp.321, 356).

Uren sites are distributed throughout much of southwestern and southcentral Ontario, and generally coincide with Early Ontario Iroquoian Stage sites. Middleport sites generally correlate with Uren sites, representing a continuation of local cultural sequences. The material culture of the Uren sub-stage includes rolled rim clay vessels with horizontal indentation on the exterior of the vessel; pipes that gradually improve in structure; gaming discs; and projectile points that favour triangular points. The material culture of Middleport sub-stage includes collared vessels decorated with oblique and horizontal indentation; a well-developed clay pipe complex that includes effigy pipes; and a marked increase in notched projectile points (Dodd et al., 1990, p. 330-342).

Settlement patterns of the Uren sub-stage reflect a preference for sand plains and do not appear to have had defensive palisades surrounding clusters of small longhouses. Subsistence patterns indicate an increasing reliance on corn cultivation, suggesting villages were occupied in the winter and campsites were occupied during the spring to fall. Settlement patterns of the Middleport sub-stage reflect a preference for drumlinized till plains. Small villages are present where palisades first appear, and longhouses are larger than those found in the Uren sub-stage. Subsistence patterns reflect an increasing reliance on corn and beans with intensive exploitation of locally available land and water species. Burial patterns graduate to ossuaries by the Middleport sub-stage (Dodd et al, 1990, pp.342-356).

1.3.1.8 The Late Ontario Iroquois Stage (ca. A.D. 1400 to 1600)

During the Late Ontario Iroquoian stage, the Iroquoian-speaking linguistic and cultural groups developed. Prior to European Contact, neighbouring Iroquois-speaking communities united to form several confederacies known as the Huron (Huron-Wendat), Neutral (called Attiewandaron by the Wendat), Petun (Tionnontaté or Khionontateronon) in Ontario, and the Five Nations of the Iroquois (Haudenosaunee) of upper New York State (Birch, 2010, p.31; Warrick, 2013, p.71).

These groups are located primarily in south and central Ontario. Each group was distinct but shared a similar pattern of life already established by the 16th century (Trigger, 1994, p.42).

Prior to European contact, the geographic distribution of pre-contact Ontario Iroquoian sites describes two major groups east and west of the Niagara Escarpment: the ancestral Attiewandaron to the west, and the ancestral Huron-Wendat to the east (Warrick, 2000, p.446). Ancestral Huron-Wendat villages have been located as far east as the Trent River watershed, where “concentrations of sites occur in the areas of the Humber River valley, the Rouge and Duffin Creek valleys, the lower Trent valley, Lake Scugog, the upper Trent River and Simcoe County” (Ramsden, 1990, p.363). These concentrations are distributed in a triangular area along the north shore of Lake Ontario and northward bounded by the Trent River system and the Niagara Escarpment (Ramsden, 1990, p.363).

To traverse their territory, the Huron-Wendat used multiple trails, portage and watercourse routes throughout their territory to travel from the north shores of Lake Ontario inland to the upper Great Lakes. These trail systems included the Toronto Carrying Place Trail. It was an ancient highway in use for hundreds of years by many groups and was a crucial trade and travel route. The Toronto Carrying Place trail had two branches: the Rouge River branch, and the Humber River Branch. Both branches trailed from Lake Ontario over the Oak Ridges Moraine and up the Holland River into Lake Simcoe (Robinson, 1965, pp.6-8; TRCA, 2007, p.9).

Settlements included longhouses, whose size depended on the mass of the extended family that inhabited it; however, archaeological evidence suggests that the average longhouse was 25 feet by 100 feet, with heights about the same as widths (Heidenreich, 1978, p.366). Village size gradually enlarged as horticulture began to take on a more central importance in subsistence patterns, particularly the farming of maize, squash, and beans, supplemented by fishing, hunting, and gathering. Sites were chosen for their proximity to sources of “water, arable soils, available firewood, [and] a young secondary forest, [as well as] a defensible position” (Heidenreich, 1978, p.375). Later villages consisted of up to 100 longhouses clustered closely together, and only the largest villages on the frontier were fortified (Heidenreich, 1978, p.377).

Subsistence patterns reflect a horticultural diet that was supplemented with fish rather than meat (Heidenreich, 1978, p.377). ‘Slash-and-burn’ farming was used to quickly and efficiently clear trees and brushwood for flour and flint corn fields (Heidenreich, 1978, p.380). These were consistently cultivated until no longer productive, at which point the village was abandoned, an event that took place about every eight to 12 years (Heidenreich, 1978, p.381). Consequently, as horticulture became the primary mode of subsistence, pre-contact native groups gradually relocated from the northern shores of Lake Ontario to further inland, likely as a result of depleting resources and growing aggression between native communities.

1.3.2 Contact Period (ca. A.D. 1600 to 1650)

At the time of European Contact, the area “south of Lake Simcoe and along the north shore of Lake Ontario remained a no-man’s land during this period, with no permanent settlements and traversed only by raiding parties from the north or from the south” (Robinson, 1965, p.11). The

Huron-Wendat villages were located north of Lake Simcoe, but their territorial hunting grounds stretched roughly between the Canadian Shield, Lake Ontario, and the Niagara Escarpment (Warrick, 2008, p.12). The Haudenosaunee were primarily located south of Lake Ontario but hunted in lands north of Lake Ontario.

Ethno-historical records left by explorers, Jesuit missionaries, and fur traders provide a history of Euro-Canadian involvement in territory identified as Huron-Wendat. By 1609, Samuel de Champlain had encountered the Huron-Wendat, and desiring greater quantities of furs, the French initiated a trading relationship with the Huron-Wendat (Trigger, 1994, p.68; Heidenreich, 1978, p.386). By mid-1620, the Huron-Wendat had exhausted all available pelts in their own hunting territories and opted to trade European goods for tobacco and furs from their neighbours (Trigger, 1994, pp.49-50).

By 1645, having grown dependent on European goods and with their territory no longer yielding enough animal pelts, the Haudenosaunee became increasingly aggressive towards the Huron-Wendat Confederacy (Trigger, 1994, p.53). Armed with Dutch guns and ammunition, the Haudenosaunee engaged in warfare with the Huron-Wendat Confederacy and brutally attacked and destroyed several Huron-Wendat villages throughout Southern Ontario (Trigger, 1994, p.53). After the massacres of 1649-50, the Huron-Wendat Confederacy dispersed widely across the Great Lakes region, where “for the next forty years, the Haudenosaunee used present-day Ontario to secure furs with the Dutch, then with the English” (Schmalz, 1991, p.17; Smith, 2013, p.19).

1.3.3 Post Contact Period (ca. A.D. 1650 – 1800)

Although their homeland was located south of the lower Great Lakes, the Haudenosaunee controlled most of Southern Ontario after the 1660s, occupying at “least half a dozen villages along the north shore of Lake Ontario and into the interior” (Schmalz, 1991, p.17; Williamson, 2013, p.60). The Haudenosaunee established “settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. Their settlements were on canoe-and-portage routes that linked Lake Ontario to Georgian Bay and the upper Great Lakes” (Williamson, 2013, p.60). The Haudenosaunee had established a village named Ganatsekwyagon at the mouth of the Rouge River, and Teiaiagon at a bend near the mouth of the Humber River to exploit both branches of the Toronto Carrying Place Trail (Robinson, 1965, pp.15-16; Schmalz, 1991, p.29). As a consequence of the French being allies of the Huron-Wendat, the Haudenosaunee prevented French explorers and missionaries from utilizing the St. Lawrence River and traveling within their territory north of Lake Ontario (Lajeunesse, 1960, p.xxix).

At this time, several Algonquin-speaking linguistic and cultural groups within the Anishinaabeg (or Anishinaabe) began to challenge the Haudenosaunee dominance in the region (Johnston, 2004, pp.9-10; Gibson, 2006, p.36). The Anishinaabeg were originally located primarily in Northern Ontario. Before contact with the Europeans, the Ojibwa territorial homeland was situated inland from the north shore of Lake Huron (MNCFN, ND, p.3). The English referred to those Algonquin-speaking linguistic and cultural groups that settled in the area bounded by Lakes Ontario, Erie, and Huron as Chippewas or Ojibwas (Smith, 2002, p.107). In 1640, the Jesuit fathers

had recorded the name “*oumisagai*, or Mississaugas, as the name of an Algonquin group near the Mississagi River on the northwestern shore of Lake Huron. The French, and later English, applied this same designation to all Algonquian [-speaking groups] settling on the north shore of Lake Ontario” (Smith, 2002, p. 107; Smith, 2013, pp.19-20). “The term ‘Mississauga’ perplexed the Algonquins, or Ojibwas, on the north shore of Lake Ontario, who knew themselves as the Anishinaabeg” (Smith, 2013, p.20).

After a major smallpox epidemic and combined with the capture of New Netherland by the British, access to guns and powder became increasingly restricted for the Haudenosaunee. After a series of successful attacks against the Haudenosaunee by groups within the Anishinaabeg from 1653 to 1662, the Haudenosaunee dominance in the region began to fail (Warrick, 2008, p.242; Schmalz, 1991, p.20). Prior to 1680, groups within the Anishinaabeg had begun to settle just north of the evacuated Huron-Wendat territory and with the British entering the fur-trading market, began to expand further into Southern Ontario (Gibson, 2006, p.36; Schmalz, 1991, p.18). By the 1690s, Haudenosaunee settlements along the northern shores of Lake Ontario were abandoned (Williamson, 2013, p.60). By 1701, after a series of successful battles throughout Ontario, the Haudenosaunee were defeated and expelled from Ontario (Gibson, 2006, p.37; Schmalz, 1991, p.27; Coyne, 1895, p.28). After these battles, the Anishinaabeg replaced the Haudenosaunee in Southern Ontario (Schmalz, 1991, p.29).

In 1701, representatives of several groups within the Anishinaabeg and the Haudenosaunee, collectively known as the First Nations, assembled in Montreal to participate in Great Peace negotiations, sponsored by the French (Johnston, 2004, p.10; Trigger, 2004, p.58). The Mississaugas were granted sole possession of the territory along and extending northward of Lake Ontario and Lake Erie (Hathaway, 1930, p.433).

From 1701 to the fall of New France in 1759, the fur trade continued in Ontario with various other groups within the Anishinaabeg trading with both the English and the French. Subsistence patterns include a primary focus on hunting, fishing and gathering with little focus on agriculture (McMillian and Yellowhorn, 2004, p.110). Groups within the Anishinaabeg, such as the Ojibwa and Mississauga, utilized housing known as a *wigwam*, a temporary and moveable structure that was easy to construct and disassemble, allowing them to travel swiftly throughout their territory (McMillian and Yellowhorn, 2004, p.111). Consequently, little archaeological material was left behind.

The Seven Years War brought warfare between the French and British in North America. In 1763, the Royal Proclamation declared the Seven Years War over, giving the British control of New France. The British did not earn the respect of the Anishinaabeg, as the British did not honour fair trade nor the Anishinaabeg occupancy of the land as the French had. Consequently, the Pontiac Uprising, also known as the Beaver Wars, began that same year (Schmalz, 1991, p.70; Johnston, 2004, pp.13-14). This uprising involved both groups within the Haudenosaunee and groups within the Anishinaabeg. After numerous attacks on the British, the Pontiac Uprising was over by 1766 when a peace agreement was concluded with Sir William Johnson, the

Superintendent of Indian Affairs (Schmalz, 1991, p.81). The fur-trade continued throughout Southern Ontario until the beginning of British colonization.

1.3.4 Euro-Canadian Settlement Period (A.D. 1800 to present)

By the end of the 1700s, the Mississaugas claimed portions of the County of York, along with the majority of Ontario (Surtees, 1994, p.94). After the American War of Independence in the late 1700s, a large number of United Empire Loyalists and American immigrants began to move into Southern Ontario. This put greater demand on the amount of available lands for Euro-Canadian and American immigrant settlement within Upper Canada.

A large tract of land stretching between Etobicoke Creek, Trent River and fronting Lake Ontario to Lake Simcoe was surrendered without formal provisions. In 1787, senior officials from the Indian Department met with the Native bands of the Carrying Place on the Bay of Quinte and Toronto to acquire land along the northern shores of Lake Ontario extending northward to Lake Simcoe. As a result of these negotiations, Sir John Johnson of the Indian Department and Lord Dorchester believed they had successfully purchased a large portion of land on the north shore of Lake Ontario. However, the documentation which formalized the 1787 transaction did not include a description of the area surrendered and these irregularities resulted in Lieutenant-Governor John Graves Simcoe to invalidate the surrender, despite assurances by the Ojibwa of Lake Simcoe that the land had been surrendered to the British. In 1805, William Claus, the Deputy Superintendent of Indian Affairs, entered into negotiations with the Mississaugas to purchase a greater tract of land consisting of 100,000 hectares in and around the Town of York. This confirmatory surrender included the northern limits of the Township of Markham (Surtees, 1994, p.107; N.A., 1891, p.xxiv). The 1787 surrender was contested into the 20th century. The William's Treaty was signed by several First Nation groups and provided for the last surrender of the last substantial portion of the territory that had not been given to government (Surtees, 1986, p.19; Champion, 1979, p.6).

The Township of Markham was named after William Markham, Archbishop of York (Champion, 1979, p.7). Markham was partially surveyed in 1794 utilizing Yonge Street, a military road that lead to the fort at Penetanguishene, as the baseline (Miles & Co, 1878, p.xiv; Mulvany and Adams, 1885, p.114). Settlement occurred as early as 1790, although the first systematic attempt occurred in 1794. The earliest settlers to Markham Township were United Empire Loyalist, French refugees and most notably, German Mennonites lead by William von Moll Berczy, a man of indomitable energy and boundless resources (Mulvany and Adams, 1885, p.115, 118). Berczy, along with 64 German families, arrived in Canada from the Pulteney Settlement in the Genesee Valley on the southern shores of Lake Ontario (Miles & Co., 1878, p.xiv; Scadding, 1873, p.415). After arriving at the Town of York and receiving their land grants, they “cut their way through the unbroken forest, and made a wagon track from York to the southern portion of Markham” and formed the beginning of Yonge Street (Mulvany and Adams, 1885, p.115). Settlement was focused around the Rouge and Don Rivers as multiple mills were constructed to service the growing community in the Township of Markham (Mulvany and Adams, 1885, p.115). Soon, the Township of Markham became noted for its advanced state of settlement and agriculture (Smith, 1851, p.41).

1.3.5 Past Land Use

To further understand the past land use history and assess the study area’s potential for the recovery of historic pre-1900 remains, several documents were reviewed, namely the 1860 *Tremaine’s Map of the County of York* and the 1878 *Illustrated Historical Atlas of the County of York* (*see Maps 3-4*).

Both the 1860 Map and 1878 Atlas revealed the study area was primarily located within the agricultural lands of several land owners. A tributary of the Don River flowed through the northwest portion of the study area.

Two historic structures are depicted within the study area in the 1860 Map, while no historic structures are depicted within 300 metres. Seven historic homesteads are depicted within the study area in the 1878 Atlas and one historic homestead is depicted within 300 metres of the study area (*see Table 1*).

Table 1: Historical Structures within the Study Area

Lot	Con.	Occupant/Owner	Structure(s)
1860 Tremaine’s Map of the County of York			
1, east half	3	Robert Wilson	No structure(s)
2, east half	3	Henry Sanders	One structure
3, southeast quarter	3	S. Wilson	No structure(s)
3, northeast quarter	3	William Chirrey	One structure
4, south half	3	William Chirrey	No structure(s)
4, north half	3	David Cummer	No structure(s)
5, west part	3	Abraham Foot	No structure(s)
1, west half	4	William Hood	No structure(s)
2, southwest quarter	4	John Cox	No structure(s)
2, northwest quarter	4	Joseph Ferrier	No structure(s)
3, all	4	J. Scott	No structure(s)
4, southwest part	4	Michael Cross	No structure(s)
1878 Illustrated Historical Atlas of the County of York			
1, east half	3	Samuel Wilson	One homestead
2, east half	3	Vincent Johnson	One homestead
3, southeast quarter	3	Wm. Cherry	One homestead
3, northeast quarter	3	Wm. Cherry	No structure(s)
4, south half	3	Wm. Cherry	No structure(s)
4, north half	3	Samuel Cummer	No structure(s)
5, west part	3	Abraham Foot	No structure(s)
1, west half	4	Wm. Hood	One homestead
2, southwest quarter	4	Jno. Cox	One homestead
2, northwest quarter	4	Vincent Johnson	One homestead
3, All	4	Jonathan Scott	No structure(s)
4, southwest part	4	Jas. Cross	One homestead

Additionally, the study area is located along present day Woodbine Avenue and Steeles Avenue, which were originally laid out during the survey of the Township of Markham. In Southern Ontario, the 2011 S&G considers lands within 300 metres of early Euro-Canadian settlements and

100 metres of early historic transportation routes (e.g., trails, passes, roads, railways, portage routes) to be of elevated archaeological potential (per *Section 1.4.1, Standard 1.c and 1.d*). Therefore, based on the close proximity of several historic structures and historic transportation routes, there is elevated potential for the location of Euro-Canadian archaeological resources (pre-1900) within portions of the study area which lie within 300 and 100 metres, respectively, of these features.

1.3.6 Present Land Use

To understand the present land use of the study area, the Official Plan (City of Markham, 2014a) was reviewed. According to the Official Plan (City of Markham, 2014a), the study area is categorized as Business Park employment, Service Employment, General Employment, Transportation and Utilities, Commercial, Mixed Use Mid Rise, Greenway, and Parkway Belt West. This data aids to inform assessment strategies.

1.4 Archaeological Context

1.4.1 Designated and Listed Cultural Heritage Resources

Consultation with the online inventory entitled 'Markham Register of Property of Cultural Heritage Value or Interest (City of Markham, 2014b), which records municipal properties that have been formally designated under Part IV of the *Ontario Heritage Act* as well as identifying listed heritage properties, confirmed the absence of a heritage property within close proximity (300 metres) of the study area.

According to *Section 1.3.1* of the *2011 S&G*, lands within 300 metres of features of archaeological potential (i.e., areas of early Euro-Canadian settlement) are considered to have elevated potential. Therefore, based on the absence of designated and listed heritage properties within close proximity of the study area (as per *Section 1.4.1., Standard 1.c., Standard 1.e.v.*), this feature does not further elevate the archaeological potential within the study area.

1.4.2 Heritage Conservation Districts

A Heritage Conservation District (HCD) includes areas that have been protected under Part V of the *Ontario Heritage Act*. An HCD can be found in both urban and rural environments and may include residential, commercial, and industrial areas, rural landscapes or entire villages or hamlets with features or land patterns that contribute to a cohesive sense of time or place and contribute to an understanding and appreciation of the cultural identity of a local community, region, province, or nation. An HCD may comprise an area with a group or complex of buildings, or large area with many buildings and properties and often extends beyond its built heritage, structures, streets, landscape and other physical and spatial elements, to include important vistas and views between and towards buildings and spaces within the district (MTCS, 2006, p.5). An HCD area contains valuable cultural heritage and must be taken into consideration during municipal planning to ensure that they are conserved.

According to *Section 1.3.1* of the *2011 S&G*, lands within 300 metres of heritage resources listed on a municipal register or designated under the *Ontario Heritage Act*, or a federal, provincial, or

municipal historic landmark or site, are considered to have elevated archaeological potential. To determine if the study area is located within close proximity to (within 300 metres of) an HCD, the 'Markham Register of Property of Cultural Heritage Value or Interest confirmed the study area is not located within or near (within 300 metres of) an HCD (City of Markham, 2014b). Therefore, based on the absence of an HCD within close proximity of the study area (as per *Section 1.4.1., Standard 1.c.*), this feature does not further elevate archaeological potential within the study area.

1.4.3 Commemorative Plaques or Monuments

According to *Section 1.3.1* of the 2011 S&G, lands within 300 metres of Aboriginal and Euro-Canadian settlements where commemorative markers of their history, such as local, provincial, or federal monuments, cairns or plaques, or heritage parks, are considered to have elevated archaeological potential. To determine if any historical plaques are present, the Ontario Historical Plaques inventory, which contains a catalogue of federal Historic Sites and Monuments Board of Canada plaques, the provincial Ontario Heritage Trust plaques, plaques identified by various historical societies, and other published plaques located in Ontario were reviewed (Ontario Historical Plaques, 2016). This review confirmed the absence of commemorative plaques within close proximity to the study area. Therefore, based on the absence of commemorative markers within close proximity of the study area (per *Section 1.4.1, Standard 1.c*), this feature does not further elevate the archaeological potential within the study area.

1.4.4 Registered Archaeological Sites

In order to provide a summary of registered or known archaeological sites within a minimum one-kilometre distance from the study area limits, as per *Section 1.1* and *Section 7.5.8, Standard 1* of the 2011 S&G, the *Ontario Archaeological Sites Database (OASD)* maintained by the MTCS was consulted (MTCS, 2015). Every archaeological site is registered according to the Borden System, which is a numbering system used throughout Canada to track archaeological sites and their artifacts.

According to the MTCS (2016), three archaeological sites have been registered within one-kilometre of the study area, where one site (AkGu-22) is located within the study area (*see Table 2*). The 2011 S&G considers lands within 300 metres of a registered archaeological site to be of elevated archaeological potential. Therefore, given that one registered archaeological sites falls within the study area (per *Section 1.4.1, Standard 1.c*), there is elevated archaeological potential within portions of the study area which lie within 300 metres of this site.

Table 2: Registered Archaeological Sites within One-Kilometre of the Study Area

Borden #	Name	Cultural Affiliation	Type
Registered Sites within the Study Area			
AkGu-22	Held	-	-
Registered Archaeological Sites within one-kilometre			
AkGu-26	Spadina Museum	Post-contact	-
AlGu-25	Scott	Pre-contact	-

"-" denotes no additional details provided in the OASD

Having noted the presence of these sites in relation to the study area, it is useful to place them in the proper context by reviewing the cultural history of occupation in Southern Ontario provided in **Table 3**. This data provides an understanding of the potential cultural activity that may have occurred within the study area (Ferris, 2013, p.13).

Table 3: History of Occupation in Southern Ontario

Period	Archaeological Culture	Date Range	Attributes
PALEOINDIAN			
Early	Gainey, Barnes, Crowfield	>11500-8500 BC	Big game hunters. Fluted projectile points
Late	Holcombe, Hi-Lo, Lanceolate	8500-7500 BC	Small nomadic hunter-gatherer bands. Lanceolate projectile points
ARCHAIC			
Early	Side-notched, corner notched, bifurcate-base	7800-6000 BC	Small nomadic hunter-gatherer bands; first notched and stemmed points, and ground stone celts.
Middle	Otter Creek, Brewerton	6000-2000 BC	Transition to territorial settlements
Late	Narrow, Broad and Small Points Normanskill, Lamoka, Genesee, Adder Orchard etc.	2500-500 BC	More numerous territorial hunter-gatherer bands; increasing use of exotic materials and artistic items for grave offerings; regional trade networks
WOODLAND			
Early	Meadowood, Middlesex	800BC-0BC	Introduction of pottery, burial ceremonialism; panregional trade networks
Middle	Point Peninsula, Saugeen, Jack's Reef Corner Notched	200 BC-AD 900	Cultural and ideological influences from Ohio Valley complex societies; incipient horticulture
Late	Algonquian, Iroquoian, Western Basin	AD 900-1250	Transition to village life and agriculture
	Algonquian, Iroquoian, Western Basin	AD 1250-1400	Establishment of large palisaded villages
	Algonquian, Iroquoian	AD 1400-1600	Tribal differentiation and warfare
HISTORIC			
Early	Huron, Neutral, Petun, Odawa, Ojibwa, Five Nations Iroquois	AD 1600 – 1650	Tribal displacements
Late	Six Nations Iroquois, Ojibwa, Mississauga	AD 1650 – 1800s	Migrations and resettlement
	Euro-Canadian	AD 1780 - present	European immigrant settlements

1.4.5 Previous Archaeological Assessments

In order to further establish the archaeological context of the study area, reports documenting previous archaeological fieldwork carried out within the limits of, or immediately adjacent to (i.e., within 50 metres) the study area were consulted. One report was identified (*see Table 4*).

Table 4: Previous Archaeological Assessments

Company	Stage of Work	Relation to Current Study Area	Recommendation
V. Konrad: documenting the discovery of the Held Site (AkGu-22)	Uncertain	Within the study area	A copy of this report was requested from the MTCS (Templeton, 2016). No report was received by report completion. However, given the present land condition of the site's location (being situated amidst an extant structure and fully developed property), it is presumed that the site has been fully mitigated/removed.

1.4.6 Physical Features

An investigation of the subject area's physical features was conducted to aid in the development of an argument for archaeological potential based on the environmental conditions of the subject area. Environmental factors such as close proximity to water, soil type, and nature of the terrain, for example, can be used as predictors to determine where human occupation may have occurred in the past.

The study area is situated within the Peel Plain and South Slope physiographic regions of Southern Ontario.

The Peel Plain is described as a level-to-undulating region of clay soils, with a gradual and fairly uniform slope toward Lake Ontario. Till containing large amounts of shale and limestone underlies clay that is generally heavy in texture. This clay is presumably brought by meltwater from the predominantly limestone regions to the north and east. Some well-drained soils are found within the Peel Plain, but the most dominant soil is Peel clay, imperfectly drained, dark brown, stone-free clay often underlain by dull brownish grey, calcareous clay till or stone-free clay. With the underlying shales not being able to retain water well, compounded by the almost complete deforestation of the region which results in a high degree of evaporation, the Peel Plain has somewhat of a water supply problem. Practically all utilized for agriculture until 1940, the land within much of the region has been urbanized, now occupying two-thirds of the Peel Plain and taking more than 50,000 hectares of good farmland out of agricultural production (Chapman & Putnam, 1984, pp. 174-176).

The South Slope physiographic region of Southern Ontario encompasses the southern slope of the Oak Ridges Moraine, but also includes a strip south of the Peel Plain. This region covers approximately 2,400 square kilometres from the Niagara Escarpment to the Trent River. The South Slope contains a variety of soils that have been conducive to agricultural use. The soils in the west are developed upon more clayey than sandy tills, and the slopes here are less steep than in the east. Portions of the South Slope region that lay in the interior, away from the lakeshore, were mainly colonized by the "second wave" of largely British immigrants after the Napoleonic Wars. Early settlers practiced mixed subsistence agriculture, although grain exportation did confer a measure of prosperity across the region, as evidenced by the construction of many fine fieldstone houses, the building of railroads and the improvement of main haulage roads. The

decline of wheat growing, however, resulted in the replacement with commercial mixed farming in which beef cattle, hogs, and dairy butter were the primary income sources. The western portion of the South Slope region has preserved less of its rural character compared to the eastern portion, as large areas around Toronto have become more urbanized (Chapman & Putnam, 1984, pp. 172-174).

Several soil types are found within the study area, including: Cashel clay, Malton Clay, Peel clay and Bottom Land. A description of their characteristics may be found in **Table 5** (Ontario Agricultural College, 1954). The great variety in soil types further highlights the mixed landscape that the study area encompasses and supports the mixed nature of past subsistence practices and changing industries of early settlers in these areas. Soils more conducive to agriculture, such as good drainage and stonefree, has the potential for past settlement, support greater population density and subsequently elevated archaeological potential.

Table 5: Study Area Soil Types

Soil Series and Type	Great Soil Group	Drainage	Topography and Stoniness	Surface Reaction	Parent Materials
Cashel clay	Grey-Brown Podzolic	Good	Smooth moderately sloping. Stonefree	Neutral	Stonefree lacustrine clay over gritty clay till at depth of 3' or less
Peel clay		Imperfect	Smooth gently sloping. Stonefree	Neutral to slightly alkaline	
Malton clay	Dark Grey Gleisolic	Poor	Smooth very gently sloping. Stonefree	Slightly alkaline	
Bottom Land	Alluvial	Variable	Variable. Stonefree	Variable	Irregularly stratified alluvial deposits

In terms of archaeological potential, potable water is a highly important resource necessary for any extended human occupation or settlement. As water sources have remained relatively stable in Southern Ontario since post-glacial times, 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. A watershed is an area drained by a river and its tributaries. As surface water collects and joins a collective water body, it picks up nutrients, sediment and pollutants, which may altogether, affect ecological processes along the way. Hydrological features such as primary water sources (i.e. lakes, rivers, creeks, streams) and secondary water sources (i.e. intermittent streams and creeks, springs, marshes, swamps) would have helped supply plant and food resources to the surrounding area and are indicators of archaeological potential (per *Section 1.3.1* of the *2011 S&G*).

The Don River lies within 300 metres close proximity to the study area. This primary water source would have helped supply plant and food resources to the surrounding area, and consequently support high potential for locating archaeological resources within 300 metres of their limits.

Therefore, given the presence of a primary hydrological resource within 300 metres of the study area, there is elevated archaeological potential within portions of the study area which lie within 300 metres of this feature.

1.4.7 Current Land Conditions

The subject area is situated within an urban and commercial/recreational area of the City of Markham (*see Map 8*).

1.4.8 Date of Field Review

A property inspection of the study area was undertaken on March 22nd, 2016 to systematically review the archaeological potential of the entire study area.

1.5 Confirmation of Archaeological Potential

Based on the information gathered from background research documented in the preceding sections, potential for the recovery of archaeological resources within the portions of the subject area limits has been established. Features contributing to archaeological potential are summarized in **Appendix B**.

2.0 PROPERTY INSPECTION

This property inspection was conducted in compliance with the standards set forth in *Section 1.2* of the *2011 S&G*. The weather and ground conditions were conducive to identifying features and assessing the land's archaeological potential.

The inspection was carried out systematically every 50 metres, reviewing the entire extent of the study area to identify the presence or absence of archaeological potential. Photographic images of the study area are presented within **Appendix C**. Location and orientation information associated with all photographs taken in the field is provided within **Map 9**.

2.1 Confirmation of Previously Identified Features of Archaeological Potential

Background research identified historical roadways as having archaeological potential, namely historic settlement roads, present-day Woodbine Avenue and Steeles Avenue. These roadways were found to be intact and situated as depicted on historic and current mapping.

2.2 Identification and Documentation of Additional Features of Archaeological Potential

During the property survey, no additional features of archaeological potential were identified.

2.3 Identification and Documentation of Features that will affect Assessment Strategies

During the property survey, features that would affect assessment strategies were identified if a Stage 2 AA were required. These features included recent land disturbances, such as extant roadways, driveways, parking lots, sidewalks, utilities, rail lines, grading and extensive landscaping.

2.4 Identification and Documentation of Structures and Built Features that will affect Assessment Strategies

During the property survey, extant structures were identified that would affect assessment strategies if a Stage 2 AA were required.

The detailed results of this property inspection are described in **Section 3.0**. An inventory of the documented record generated in the field can be found within **Appendix D**.

3.0 ANALYSIS AND CONCLUSIONS

3.1 Historical Imagery

A detailed review of aerial photographs taken from 1954 to 1988 (*see Maps 5-7*), and satellite imagery taken in 2015 (*see Map 8*), reveals that the study area has undergone significant changes since 1954.

In 1954, the study area was largely vacant, encompassing agricultural fields with a few farmsteads situated along Woodbine Avenue (*see Map 5*). By 1978, large portions of the study area were undergoing commercial development, with new roadways being established and large swaths of land were no longer used for agricultural purposes (*see Map 6*). Additionally, a rail line was extended within the northern limit of the study area. The 1988 aerial photograph reveals that the study area was almost fully developed by this time, with Highway 404 extending along the western limit of the study area and the majority of available lands had been graded and built upon. Only a small portion within the northern part of the study area along Woodbine Avenue appears to remain as an open field (*see Map 7*). The study area appears to have remained relatively unchanged since (*see Map 8*).

3.2 Identified Deep and Extensive Disturbances

The study area was evaluated for extensive disturbances that have removed archaeological potential. Disturbances may include but are not limited to: grading below topsoil, quarrying, building footprints, or sewage and infrastructure development. *Section 1.3.2* of the *2011 S&G* considers infrastructure development among those “features indicating that archaeological potential has been removed.”

Extant structures, roadways, driveways, parking lots, sidewalks, utilities, rail lines, grading and extensive landscaping represent disturbed conditions (*see Map 9; Images 1-6*). The construction these features would have resulted in severe damage to the integrity of any archaeological resources which may have been present, thus resulting in the removal of archaeological potential within their footprints.

3.3 Identified Areas of Archaeological Potential

Portions of the study area that exhibit neither extensively disturbed conditions nor contain physical features of no or low archaeological potential are considered to retain archaeological potential. These areas of archeological potential include, but are not limited to an area of overgrown vegetation and trees along the west side of Woodbine Avenue, and a manicured grassed field within the northern extent of the study area (*see Map 9; Image 7*).

4.0 RECOMMENDATIONS

In light of the findings detailed in preceding sections, the following recommendations are presented:

1. As per *Section 1.4.1, Standard 1.f.* and *Section 1.4.2, Standard 1* of the 2011 S&G, areas that exhibit disturbed conditions are recommended to be exempt from a Stage 2 AA.
2. All identified areas retaining archaeological potential must be subjected to a Stage 2 AA. Given the presence of overgrown vegetation, trees and urban location of the study area, ploughing in advance of Stage 2 pedestrian survey will not be possible, therefore these areas will need to be subjected to a Stage 2 shovel test pit archaeological survey in accordance with *Section 2.1.2* of the 2011 S&G.

No excavation activities shall take place within the study area prior to the MTCS (Archaeology Program Unit) confirming in writing that all archaeological licensing and technical review requirements have been satisfied.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

1. This report is submitted to the MTCS as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the MTCS, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
2. 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 fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
3. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
4. The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the *Ministry of Consumer Services*.

6.0 BIBLIOGRAPHY AND SOURCES

Birch, J. (2010). *Coalescence and Conflict in Iroquoian Ontario*. [Online]. Available at: [http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence and Conflict in Iroquoian Ontario](http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence%20and%20Conflict%20in%20Iroquoian%20Ontario) [Accessed 19 February 2016].

Champion, I. (1979). *Markham, 1793-1900*. [Online]. Available at: <http://www.ourroots.ca/toc.aspx?id=12398&gryID=cb92dbeb-2d29-492a-98cc-7e92479d1df8>. [Accessed 19 February 2016].

Chapman, L. J. and Putnam, D. F. (1984). *Physiography of Southern Ontario. 3rd ed. Ontario Geological Survey, Special Volume 2*. Toronto: Ministry of Natural Resources.

City of Markham. (2014a). *Official Plan – Map 3 – Land Use*. [Online]. Available at: https://www.markham.ca/wps/wcm/connect/markhampublic/fd38abe1-932c-4630-9aed-d9725f3fea40/Official_Plan_Map_3_Land_Use.pdf?MOD=AJPERES&CACHEID=fd38abe1-932c-4630-9aed-d9725f3fea40 [Accessed 22 March 2016].

City of Markham. (2014b). *Markham Register of Property of Cultural Heritage Value or Interest*. [Online]. Available at: https://www.markham.ca/wps/portal/Markham/BusinessDevelopment/PlanningAndDevelopmentServices/HeritageServices/sa-heritagepropertyregister/sa-heritagepropertysearch/heritagepropertysearch!/ut/p/a1/IZJfb4lwFMU_kemVf4VHHIHdQMSJC9LAWw6OSCFmG2ffmjMkiUDXN9u-zu9t-cUpeil0pgeeUI73tT0dKIT7UXRd6blbCB0tpIB5MFey8QN5EhSBiAZAMs11wr2ACBybSA4XEWB_yQD0e7Tw8gy4bcebz1n0O8dO9hrsm5KKEaJhdKt9sFliFKUtrRkOet4WV-riOcowUuguaGDomljowxokedFUVDARaZAlt-GmOgy84j40msCITADDHfcgMC1LO-gh9JOASDEPqgbO1zq-hwA0g2YiuIKTHidDD7g8SExeV6HqY93RC8J3_LLS2p9teB10aBjRxcVE7wfcmxF0zLRfwpW8q5n4sDilGRVeg4sh_bP7-jfY-it935ZBBOXtX2_OWt1G_lvwHA/dI5/d5/L2dJQSEvUUt3QS80SmlFL1o2XzQ4UkFDRk4wUUZQMjkwSUVESDNJR08zVTIO/ [Accessed 19 February 2016].

City of Markham. (2016a). *Heritage Matters in Markham – A History of the Town of Markham*. [Online]. Available at: http://www.markham.ca/wps/wcm/connect/markhampublic/41622952-0ac8-4886-bb53-b457a001b980/markham_history.pdf?MOD=AJPERES&useDefaultText=0&useDefaultDesc=0 [Accessed 19 February 2016].

City of Toronto. (2008). TO Maps – Archaeological Potential Layer. [Online]. Available at: <http://map.toronto.ca/imapit/iMapIt.jsp?app=TOMaps> [Accessed 19 February 2016].

Coyne, J.H. (1895). *The Country of the Neutrals (as far as comprised in the County of Elgin) From Champlain to Talbot*. [Online]. Available at: https://archive.org/stream/cihm_03619#page/n7/mode/2up [Accessed 19 February 2016].

Dodd, C.F., Poulton, D. R., Lennox, P.A., Smith, D.G., and Warrick, G.A. (1990). The Middle Ontario Iroquoian Stage. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 321-359.

Ellis, C.J. and Deller, D.B. (1990). Paleo-Indians. In C.J. Ellis, and N. Ferris, (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 37-64.

Ellis, C.J., Kenyon, I.T., and Spence, M.W. (1990). The Archaic. In C.J. Ellis, and N. Ferris, (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 65-124.

Ellis, C. J. (2013). Before Pottery: Paleoindian and Archaic Hunter-Gathers. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Ontario: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press.

Energy, Mines and Resources Canada. (1994). *National Topographic Survey of Canada, Series A 751, Map 30 M/14. 9th ed.* Ottawa.

Ferris, N. (2013). Seeing Ontario's Past Archaeologically. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Ontario: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press, p.3-20.

Ferris, N. and Spence, M.W. (1995). The Woodland Traditions in Southern Ontario. *Revista de Arqueologia Americana* (9), 83-138.

Fox, W. A. (1990). The Middle Woodland to Late Woodland Transition. In C.J. Ellis, and N. Ferris, (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 171-188.

Gibson, M. M. (2006). *In the Footsteps of the Mississaugas*. Mississauga, Ontario: Mississauga Heritage Foundation.

Google Earth. (2016). Satellite Imaging. [Online]. Available at: <http://www.google.com/earth/>. [Accessed 19 February 2016].

Government of Canada. (2016). *NRCan 1:30 000 Topographic Map, NTS Markham 030M14*. [Online]. Available at: <http://atlas.gc.ca/toporama/en/index.html>. [Accessed 19 February 2016].

Hathaway, E, the Late (1930). *The River Credit and the Mississaugas*. In *Ontario Historical Society Papers and Records Vol. xxvi*. Toronto: Ontario Historical Society.

Heidenreich, C.E. (1978). Huron. In B.G. Trigger (Ed.). *Volume 15: Northeast*. Washington: Smithsonian Institution, pp.368-388.

Hunting Survey Corporation Limited (1954). *Digital Aerial Photographs, Southern Ontario*. [Online]. Available at http://maps.library.utoronto.ca/data/on/AP_1954/index.html [Accessed 19 February 2016].

Johnston, D. (2004). *Connecting People to Place: Great Lakes Aboriginal History in Cultural Context*. [Online]. Available at: http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/transcripts/pdf/P1_Tab_1.pdf [Accessed 19 February 2016].

Karrow, P.F. and Warner, B.G. (1990). The Geological and Biological Environment for Human Occupation in Southern Ontario. In C.J. Ellis, and N. Ferris (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 5-35.

Lajeunesse, E. J. (1960). *The Windsor Border Region: Canada's Southernmost Frontier*. Toronto: The Champlain Society.

McMillan, A. D. and Yellowhorn, E. (2004). *First People in Canada*. Vancouver, B.C.: Douglas & McIntyre.

Miles & Co. (1878). *Illustrated Historical Atlas of the County of York, Ontario*. Toronto.

Mississauga of the New Credit First Nation (MNCFN). (N.D.). *The History of the Mississauga of the New Credit First Nation*. Ottawa, Ontario: Praxis Research Associates.

Mulvany, C.P. and Adam, G. M. (1885). *History of Toronto and County of York, Ontario: containing an outline of the history of the Dominion of Canada, a history of the city of Toronto and the county of York, with the townships, towns, villages, churches, schools; general and local statistics; biographical sketches, etc., etc. Volume 1*. [Online]. Available at: <http://www.ourroots.ca/toc.aspx?id=3668&qryID=9420b906-028b-49f4-85ad-c5f70662bcf2> [Accessed 19 February 2016].

No Author. (1891). *Indian Treaties and Surrenders from 1680 to 1890*. Ottawa: Browns Chamberlin Printers.

Ontario Agricultural College (1954). *Soil Map of York County, Soil Survey Report No. 19*. Guelph: Soil Research Institute.

Ontario Historical Plaques. (2016). *Plaque Map*. [Online]. Available at: http://www.ontarioplaques.com/Menu_Map.html [Accessed 19 February 2016].

Ontario Ministry of Tourism, Culture and Sport. (2006). *Heritage Conservation Districts: A Guide to District Designation under the Ontario Heritage Act*. [Online]. Available at: [http://www.mtc.gov.on.ca/en/publications/Heritage Tool Kit HCD English.pdf](http://www.mtc.gov.on.ca/en/publications/Heritage_Tool_Kit_HCD_English.pdf) [Accessed 19 February 2016].

Ontario Ministry of Tourism, Culture and Sport. (2011). *Standards and Guidelines for Consultant Archaeologists*. Toronto: Ministry of Tourism, Culture and Sport.

Ontario Ministry of Tourism, Culture and Sport (2016). *Sites within a One Kilometre Radius of the Project Area*, provided from the Ontario Archaeological Sites Database, 16 February 2016.

Ramsden, P.G. (1990). The Hurons: Archaeology and Culture History. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 361-384.

The Regional Municipality of York. (2016). *1988 Aerials*. [Online]. Available at: <http://ww4.yorkmaps.ca/YorkMaps/CommunityServices/index.html> [Accessed 19 February 2016].

Robinson, P.J. (1965). *Toronto during the French Regime: 1615-1793*. Toronto: University of Toronto Press.

Scadding, H. (1873). *Toronto of Old: Collections and Recollections*. [Online]. Available at: <http://archive.org/stream/torontoofoldcoll00scaduoft#page/n5/mode/2up> [Accessed 19 February 2016].

Schmalz, P.S. (1991). *The Ojibwa of Southern Ontario*. Toronto, Canada: University of Toronto Press.

Smith, D.G. (1990). Iroquoian Societies in Southern Ontario: Introduction and Historical Overview. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp.279-290.

Smith, D.G. (2002). Their Century and a Half on the Credit: The Mississaugas in Mississauga. In *Mississauga: The First 10,000 Years*. Toronto, Ontario: The Mississauga Heritage Foundation Inc., 123-138.

Smith, W.H. (1846). *Smith's Canadian Gazetteer: Comprising statistical and general information respecting all parts of the upper province, or Canada West*. [Online]. Available at: <https://archive.org/details/smithscanadianga00smit> [Accessed 19 February 2016].

Smith, W.H. (1851). *Canada: Past, Present and Future – being a historical, geographical, geological and statistical account of Canada West*. [Online]. Available at: http://openlibrary.org/books/OL13998589M/Canada_past_present_and_future [Accessed 19 February 2016].

Smith, D.B. (2013). *Sacred Feathers: The Reverend Peter Jones (Kahkewaquonaby) and the Mississauga Indians*. Toronto: University of Toronto Press.

Spence, M.W., Pihl, R.H., and Murphy, C.R. (1990). Cultural Complexes of the Early and Middle Woodland Periods. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 125-169.

Stewart, A.M. (2013). Water and Land. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Ontario: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press.

Surtees, R. J. (1986). *Treaty Research Report: The Williams Treaties*. [Online]. Available at http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/tra_w_1100100029001_eng.pdf [Accessed 19 February 2016].

Surtees, R.J. (1994). Land Cessions, 1763-1830. In E.S. Rogers, (Ed.). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Toronto, Ontario: Dundurn Press Limited, pp. 92-121.

Toronto and Region Conservation Authority (TRCA). (2007). *Rouge River State of the Watershed Report*. [Online]. Available at: <http://www.trca.on.ca/dotAsset/37769.pdf> [Accessed 19 February 2016].

Templeton, L. (2016). Email to archaeology@ontario.ca re: Report Request: P390-0175-2016, 19 February 2016.

Tremaine, G. (1860). *Tremaine's Map of the County of York, Canada West*. Toronto.

Trigger, Bruce G. (1994). The Original Iroquoians: Huron, Petun and Neutral. In Edward S. Rogers (Eds.). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Toronto, Ontario: Dundurn Press Limited, pp 41-63.

Warrick, G.A. (2000). The Precontact Iroquoian Occupation of Southern Ontario. In *Journal of World Prehistory*, Vol.14, No.4, pp. 415-466.

Warrick, G. (2008). *A Population History of the Huron-Petun, A.D. 500-1650*. New York: Cambridge University Press.

Warrick, G. (2013). The Aboriginal Population of Ontario in Late Prehistory. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Ontario: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press.

Williamson, R. F. (1990). The Early Iroquoian Period of Southern Ontario. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 291-320.

Williamson, R.F. (2013). The Woodland Period, 900 BCE to 1700 CE. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Ontario: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press

Wright, J.V. (1994). Before European Contact. In Edward S. Rogers (Eds.). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Toronto, Ontario: Dundurn Press Limited, pp 21-40

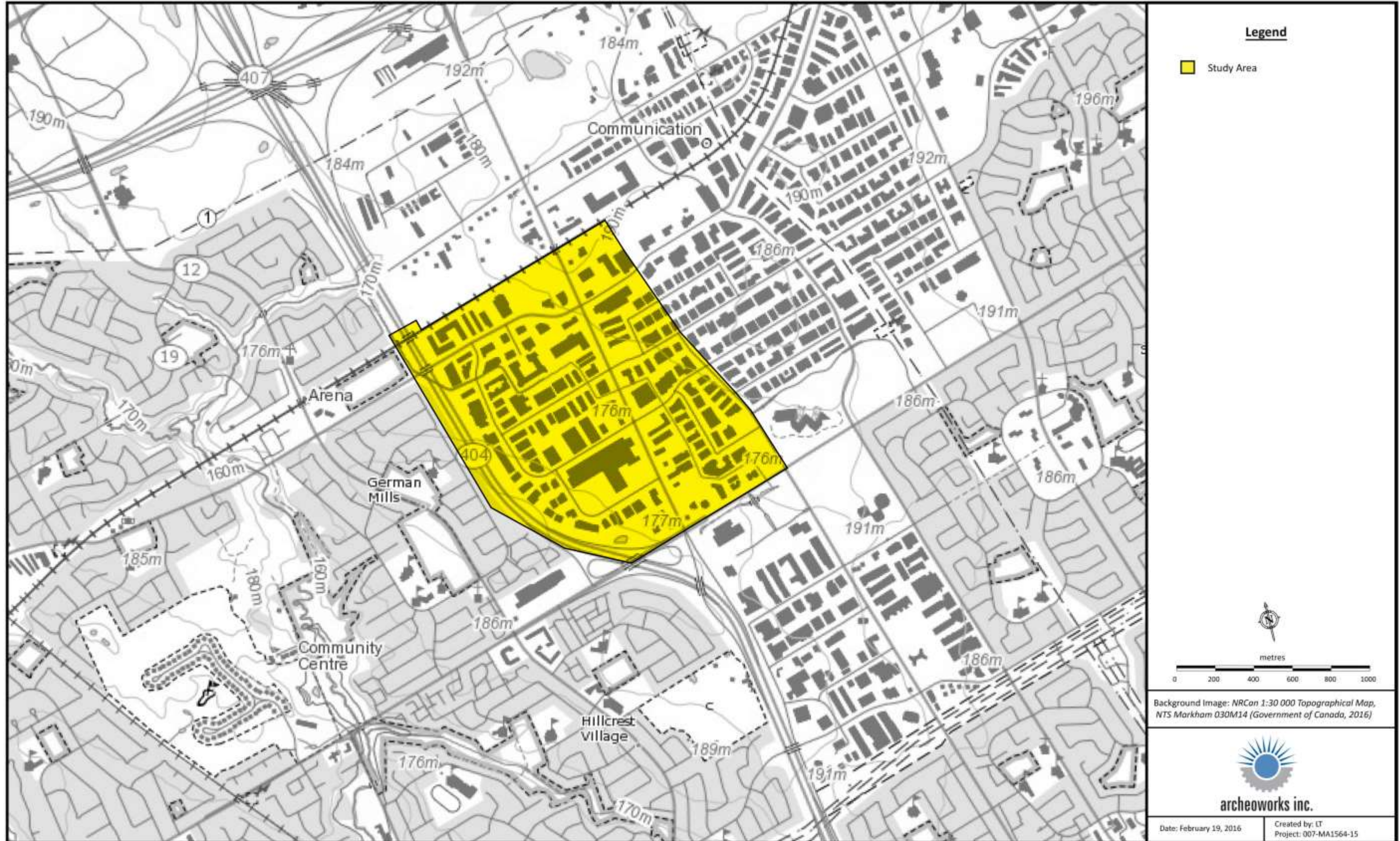
Wright, J.V. (1999). *A History of the Native People of Canada: Volume II (1,000B.C. – A.D. 500)*. Hull, Quebec: Museum of Civilization.

York Maps. (2016). *Archaeological Potential Layer*. [Online]. Available at: <http://ww4.yorkmaps.ca/YorkMaps/CommunityServices/index.html> [Accessed 19 February 2016].

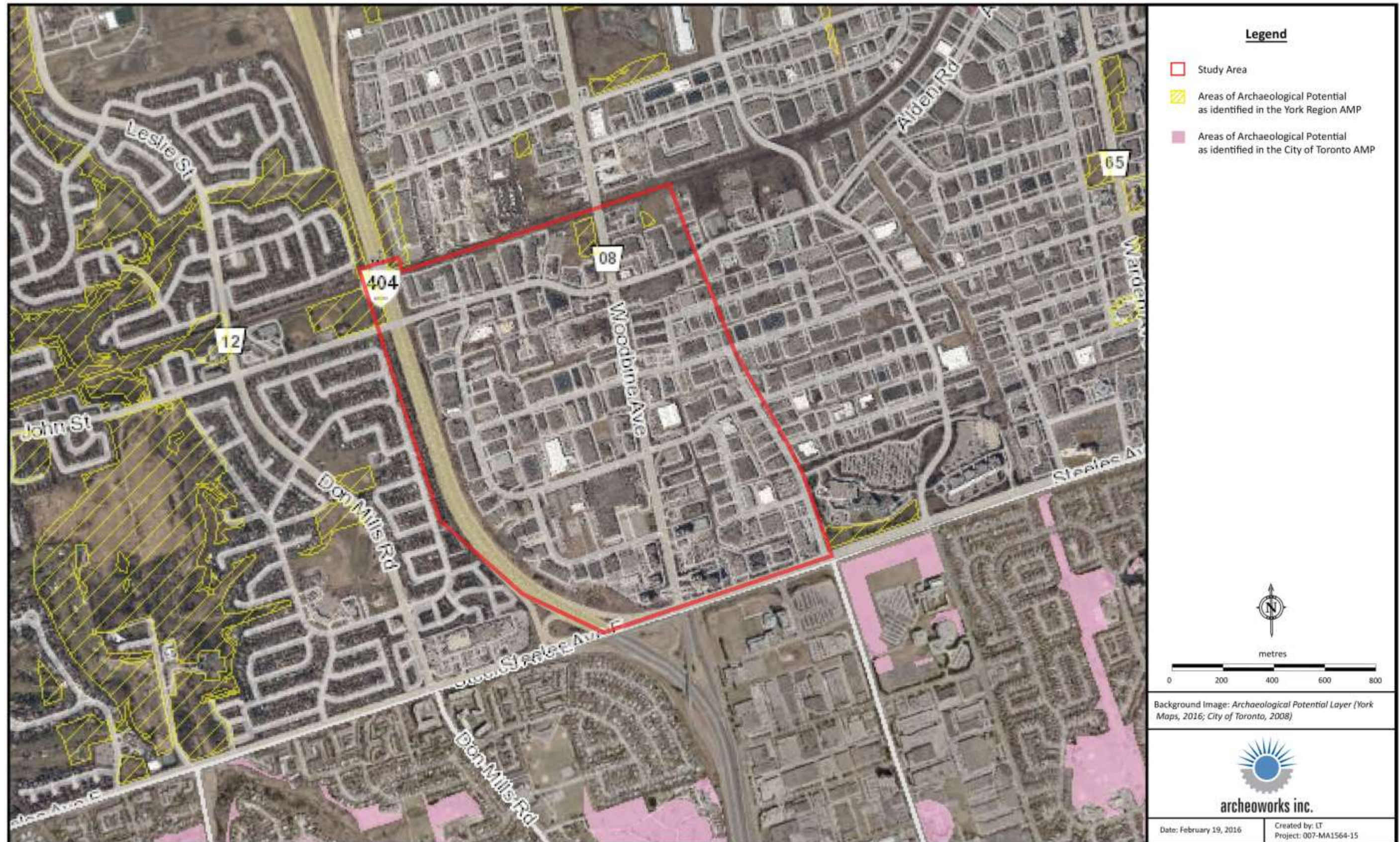
APPENDICES

DRAFT

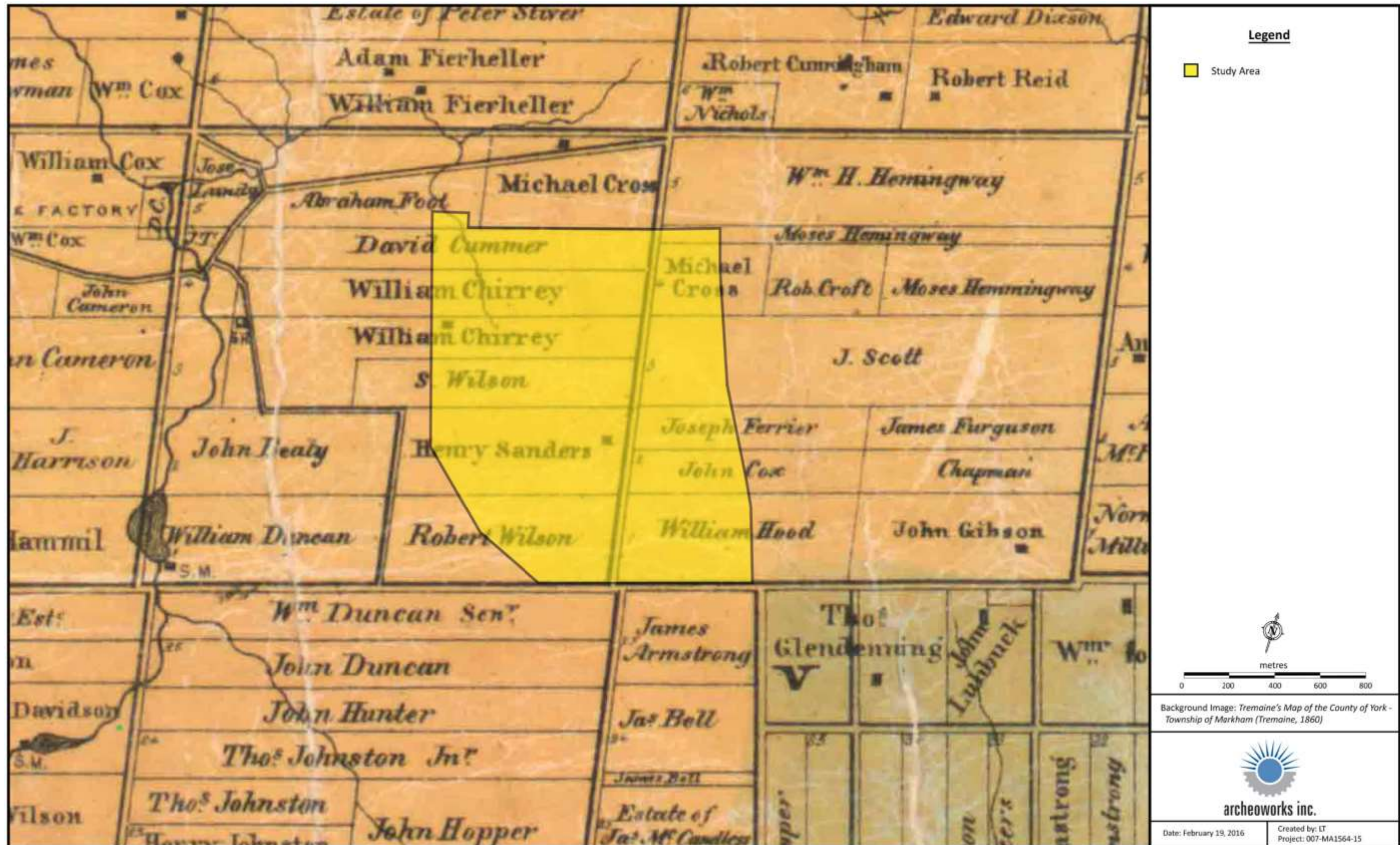
APPENDIX A: MAPS



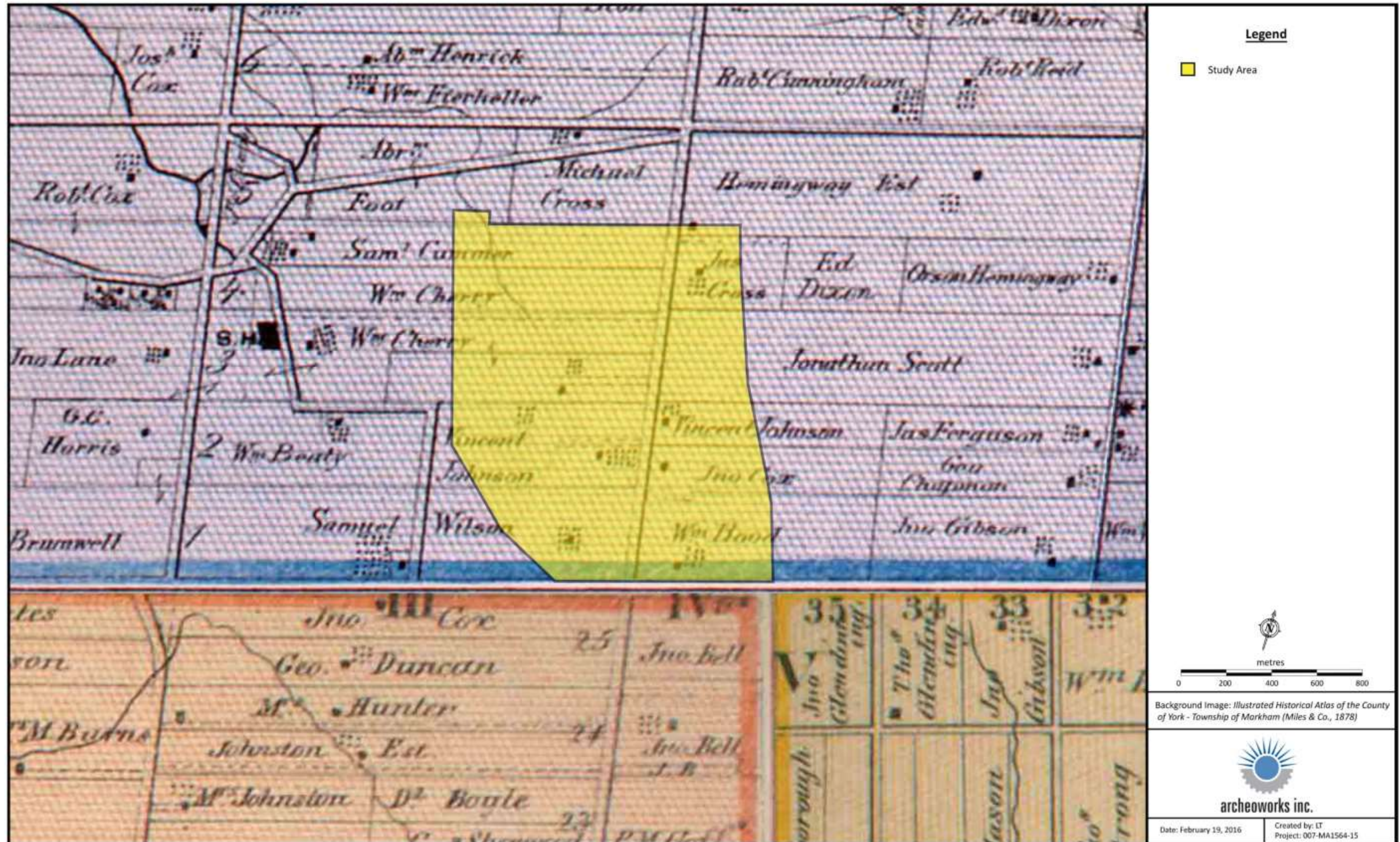
Map 1: NRCan Topographical Map, NTS Markham 030M14 (Natural Resource Canada, 2016) identifying the Stage 1 AA study area.



Map 2: Illustrating areas of archaeological potential as identified within the York Region AMP (York Maps, 2015, City of Toronto, 2008).



Map 3: Stage 1 AA study area within the Tremaine's of the County of York (Tremaine, 1860).



Map 4: Stage 1 AA study area within the Illustrated Historical Atlas of the County of York (Miles & Co., 1878).



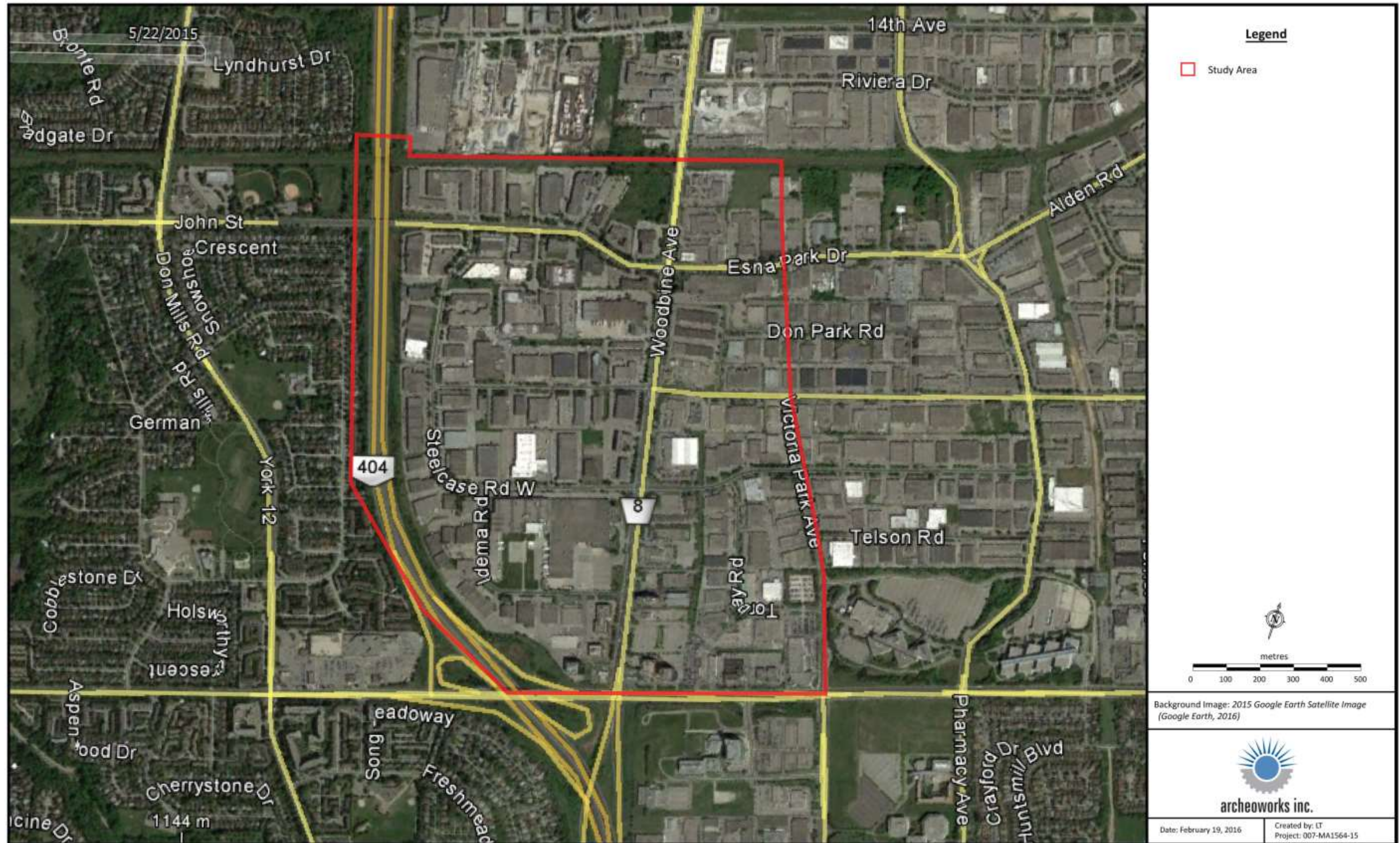
Map 5: Stage 1 AA study area within a 1954 aerial photograph (Hunting Survey Corporation Ltd., 1954).



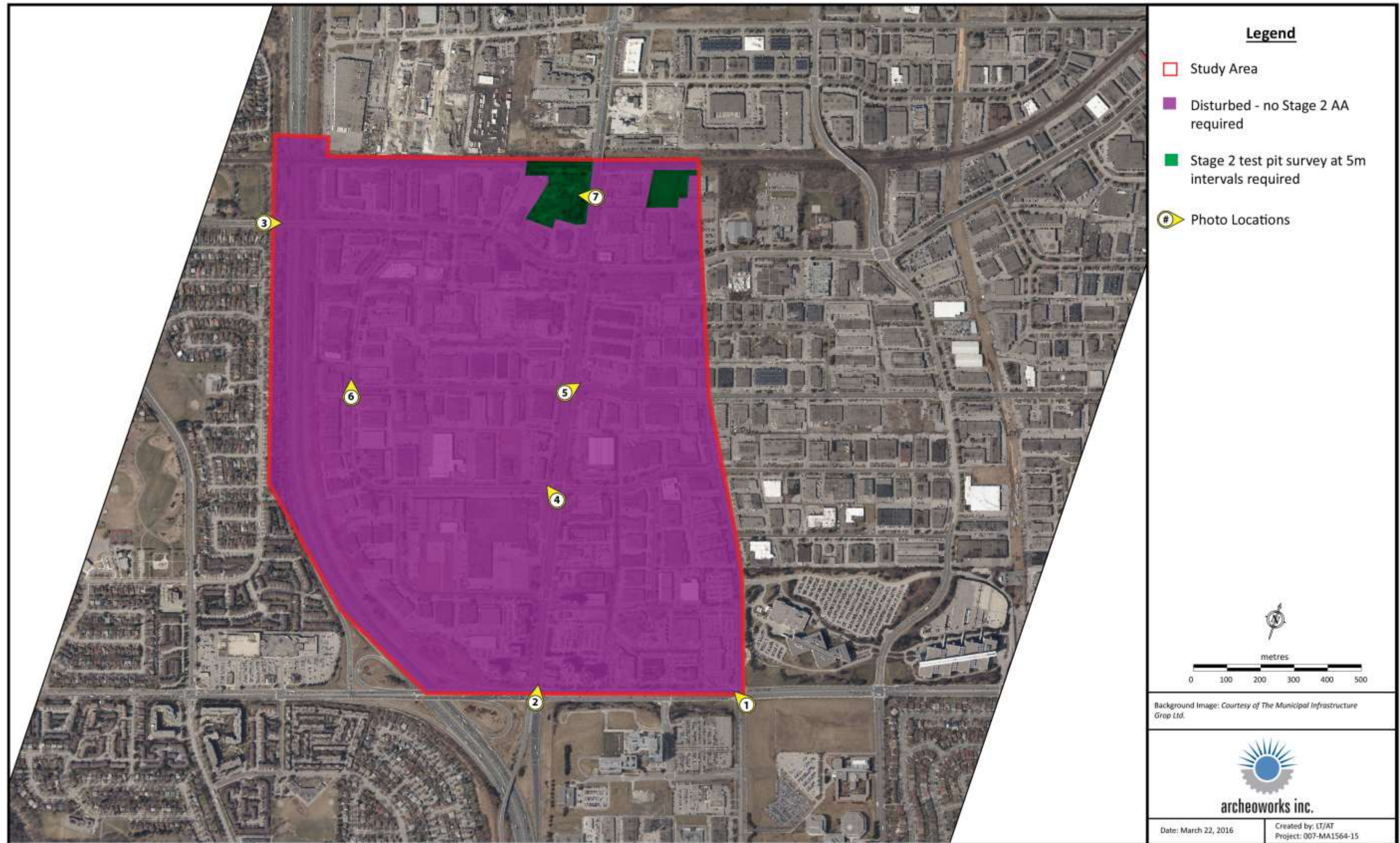
Map 6: Stage 1 AA study area within a 1971 aerial photograph (York County Forest Resource Inventory Aerial Photographic Print, 1971).



Map 7: Stage 1 AA study area within a 1988 aerial photograph (The Regional Municipality of York, 2016).



Map 8: Stage 1 AA study area within a 2015 satellite image (Google Earth, 2016).



Map 9: Stage 1 AA results of the study area with image locations indicated.

APPENDIX B: SUMMARY OF BACKGROUND RESEARCH

Feature of Archaeological Potential		Yes	No	Unknown	Comment
1	Known archaeological sites within 300 m?	X			If Yes, potential confirmed
Physical Features		Yes	No	Unknown	Comment
2	Is there water on or near the property?		X		If Yes, potential confirmed
2a	Presence of primary water source within 300 metres of the subject area (lakes, rivers, streams, creeks)	X			If Yes, potential confirmed
2b	Presence of secondary water source within 300 metres of the subject area (intermittent creeks and streams, springs, marshes, swamps)		X		If Yes, potential confirmed
2c	Features indicating past presence of water source within 300 metres (former shorelines, relic water channels, beach ridges)		X		If Yes, potential confirmed
2d	Accessible or inaccessible shoreline (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)		X		If Yes, potential confirmed
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		X		If Yes to two or more of 3-5 or 7-10, potential confirmed
4	Pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground		X		If Yes to two or more of 3-5 or 7-10, potential confirmed
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		X		If Yes to two or more of 3-5 or 7-10, potential confirmed
Cultural Features		Yes	No	Unknown	Comment
6	Is there a known burial site or cemetery that is registered with the Cemeteries Regulation Unit on or directly adjacent to the property?		X		If Yes, potential confirmed
7	Associated with food or scarce resource harvest areas (traditional fishing locations, food extraction areas, raw material outcrops, etc.)		X		If Yes to two or more of 3-5 or 7-10, potential confirmed
8	Indications of early Euro-Canadian settlement (monuments, cemeteries, structures, etc.) within 300 metres	X			If Yes to two or more of 3-5 or 7-10, potential confirmed
9	Associated with historic transportation route (historic road, trail, portage, rail corridor, etc.) within 100 metres of the property	X			If Yes to two or more of 3-5 or 7-10, potential confirmed
Property-specific Information		Yes	No	Unknown	Comment
10	Contains property designated under the Ontario Heritage Act		X		7 designated and 76 listed heritage properties within 300 metres
11	Local knowledge (aboriginal communities, heritage organizations, municipal heritage committees, etc.)		X		If Yes, potential confirmed
12	Recent ground disturbance, not including agricultural cultivation (post-1960, extensive and deep land alterations)	X- portions			If Yes, low archaeological potential is determined

APPENDIX C: IMAGES



Image 1: A view of disturbances associated with paved roadway/sidewalk, extant structures, utilities and extensive landscaping.



Image 2: A view of disturbances associated with paved roadway/sidewalk/driveway, extant structures, utilities and extensive landscaping.



Image 3: A view of disturbances associated with paved roadways/sidewalk, extant structures and utilities.



Image 4: A view of disturbances associated with paved roadway, parking area, extant structure utilities and extensive landscaping.



Image 5: A view of disturbances associated with paved roadway, extant structures, utilities, and grading.



Image 6: A view of disturbances associated with paved roadway/sidewalk, extant structures, grading, utilities, and extensive landscaping.



Image 7: A view of overgrown and treed area with archaeological potential.

DRAFT

APPENDIX D: INVENTORY OF DOCUMENTARY AND MATERIAL RECORD

Project Information:				
Project Number:		007-MA1564-15		
Licensee:		Nimal Nithiyantham (P390)		
MTCS PIF:		P390-0175-2016		
Document/ Material		Location		Comments
1.	Research/ Analysis/ Reporting Material	Digital files stored in: /2015/007-MA1564-15 - Don Mills Channel Flood Reduction EA - Markham		Archeoworks Inc., 16715-12 Yonge Street, Suite 1029, Newmarket, ON, Canada, L3X 1X4
2.	Digital Images	Digital Photos: 30 photos		Archeoworks Inc., 16715-12 Yonge Street, Suite 1029, Newmarket, ON, Canada, L3X 1X4
				Stored on Archeoworks network server

Under Section 6 of Regulation 881 of the *Ontario Heritage Act*, *Archeoworks Inc.* will, “keep in safekeeping all objects of archaeological significance that are found under the authority of the licence and all field records that are made in the course of the work authorized by the licence, except where the objects and records are donated to Her Majesty the Queen in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act.”

APPENDIX E: CHANGES SINCE PIF SUBMISSION

Study area Limits

The initial map submitted with the PIF has since changed as more accurate mapping was provided by the proponent.

DRAFT