



**Stage 1 Archaeological
Assessment: Rolling Meadows
Due Diligence**

Part of Lots 43, 44, 66 and 67, Former
Township of Thorold, former County of
Welland, now City of Thorold, Regional
Municipality of Niagara, Ontario

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Prepared for:

Parkbridge
70 Huron Street
Collingwood, ON L9Y 4L4

Prepared by:

Stantec Consulting Ltd.
300W-675 Cochrane Drive
Markham, Ontario L3R 0B8

Licensee: Heather Kerr, MA
License Number: P1148
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ORIGINAL REPORT



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STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

EXECUTIVE SUMMARY

Stantec Consulting Ltd. (Stantec) was retained by Parkbridge to undertake a Stage 1 archaeological assessment in support of their due diligence review of the Rolling Meadows property (the study area) in the City of Thorold, Ontario. The property is being considered for purchase for future development. This Stage 1 archaeological assessment is being completed as part of Parkbridges's real estate due diligence. The Stage 1 archaeological assessment was conducted under Project Information Form (PIF) number P1148-0042-2022 issued to Heather Kerr, MA, by the Ministry of Tourism, Culture and Sport (MTCS).

The Stage 1 archaeological assessment determined that the entire study area retains potential for the identification and recovery of archaeological resources. No property inspection was completed as part of this Stage 1 archaeological assessment.

In accordance with Section 1.3 and Section 7.7.4 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended for the entire study area.** Full and detailed recommendations are provided in the body of the report.

The MTCS is asked to review the results presented and to accept this report into the *Ontario Public Register of Archaeological Reports*.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.



Project Personnel

Project Manager:	Nathan Jamieson, P.Eng. Shafqat Ali Khan, P.Eng., PMP
Archaeology Lead:	Paul David Ritchie, MA (P392)
Licensed Archaeologist:	Heather Kerr, MA (P1148)
Report Writer:	Paul David Ritchie, MA (P392)
Mapping:	Brian Cowper, HNC
Quality Review:	Colin Varley, MA, RPA (P002)
Independent Review:	Tracie Carmichael, BA. B.Ed. (R140)

Acknowledgements

Proponent Contact:	Tom Patterson, Parkbridge
Ministry of Heritage, Sport, Tourism and Culture Industries:	Robert von Bitter, Archaeological Data Coordinator



1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by Parkbridge to undertake a Stage 1 archaeological assessment in support of their due diligence review of the Rolling Meadows property (the study area) in the City of Thorold, Ontario (Figure 1). The property is being considered for purchase for future development. This Stage 1 archaeological assessment is being completed as part of Parkbridge's real estate due diligence. The study area for the Project is approximately 40.04 hectares (ha) (Figure 2).

1.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Tourism, Culture and Sport' (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 component of the assessment are as follows:

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

To meet these objectives, Stantec archaeologists employed the following research strategies:

- A review of relevant archaeological, historical, and environmental literature pertaining to the study area.
- A review of the land use history, including pertinent historical maps.
- An examination of the MTCS' *Ontario Archaeological Sites Database* to determine the presence of registered archaeological sites in and around the study area.
- A query of the MTCS' *Ontario Public Register of Archaeological Reports* to determine the presence of previous archaeological assessments within 50 metres of the study area.

As no property inspection occurred for the Stage 1 assessment no permission to access the property was required.

1.2 HISTORICAL CONTEXT

1.2.1 Post-contact Indigenous Resources

"Contact" is typically used as a chronological benchmark when discussing Indigenous archaeology in Canada and describes the contact between Indigenous and European cultures. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).



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Broadly, the post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking communities by the New York State Iroquois and the subsequent arrival of Algonkian-speaking groups from northern Ontario at the end of the 17th century and the beginning of the 18th century (Konrad 1981; Schmalz 1991). Numerous Indigenous groups and communities are associated with the post-contact occupation of southern Ontario and the general area of the Project.

At the turn of the 17th century, the region of the study area was occupied by Iroquoian populations who are historically described as the *Neutre* (by the French) or the *Attiwandaron* (by the Huron-Wendat) and known generally in English as the Neutral; their autonym is not conclusively known (Birch 2015). This group may be ancestral Haudenosaunee as they had similar culture, language, and ceremonies and were considered by the Haudenosaunee to be under the Great Law governance (Hill 2017). To the north was territory occupied by the Wendat-Tionantaté (Huron-Petun) (Heidenreich 1978). The Five Nations Iroquois, located in present-day upstate New York, failed to convince the Wendat-Tionantaté to join them in an alliance (Warrick 2013). In 1649, the Seneca and the Mohawk led a campaign into southern Ontario and dispersed the Attiwandaron (Neutral) and the Wendat-Tionantaté, and established dominance over the region (Heidenreich 1978; Konrad 1981).

In 1667, surviving Huron-Wendat warriors joined alliance with the French-allied Ojibwa and Mississaugas to counterattack the Iroquois who had settled along the north shore of Lake Ontario. By 1690, Ojibwa (Anishinaabe) speaking people had begun returning to the lower Great Lakes basin (Konrad 1981; Rogers 1978). Mississauga oral traditions, as told by Chief Robert Paudash and recorded in 1905, indicate that after the Mississauga defeat of the Mohawk, the Mohawk retreated to their homeland south of Lake Ontario and a peace treaty was negotiated between those groups around 1695 (Paudash 1905). Upon the Mississaugas' return they decided to settle permanently in southern Ontario. The Mississaugas' settled and inhabited a large area at the western end of Lake Ontario throughout the 1700s and into the 1800s. Between 1695 and the mid-1820s the Mississaugas' continued to follow a yearly cycle of resource harvest and movement throughout their southern Ontario territory (Praxis Research Associates n.d.).

Despite the differentiation among these groups in Euro-Canadian sources, there was a considerably different view by Indigenous groups concerning their self-identification during the first few centuries of European contact. These peoples relied upon kinship ties that cut across European notions of nation identity (Bohaker 2006:277-283). Many of the British-imposed nation names such as Chippewa, Ottawa, Potawatomi, or Mississauga artificially separated how self-identified Indigenous peoples' classified themselves; these groups were culturally and socially more alike than contemporary European documentation might indicate (Bohaker 2006:1-8).

The study area falls within the historical and traditional territory of a number of Indigenous communities, including but not limited to; the Mississaugas of the Credit First Nation (Wybenga and Dalton 2018), the Six Nations of the Grand River, and the Haudenosaunee Confederacy. Since contact with European explorers and immigrants, and, later, with the establishment of provincial and federal governments (the Crown), the lands within Ontario and the Niagara peninsula have been included in various treaties, land claims, and land cessions. Though not an exhaustive list, Morris (1943) provides a general outline of some of the treaties within the Province of Ontario from 1783 to 1923. While it is difficult to exactly



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delineate treaty boundaries today, an approximate outline of the treaty lands described by Morris (1943) is provided in Figure 3.

The study areas are situated within the limits of the 1781 Niagara Treaty between the British Government (“the Crown”) and the Chippewa and Mississauga Nation (Indigenous and Northern Affairs Canada 2016), also known as Treaty 381. While it is difficult to delineate treaty boundaries today, the approximate outline of the limits of the Niagara Treaty are shown labeled as “A” on Figure 3 (Morris 1943). Treaty Number 381 is described as:

The First Indian Purchase ... was made in the year 1764 at Fort Niagara from the Iroquois and Chippewa Indians, but it was not until May 9th, 1781 that a treaty was signed with the Mississaugas and Chippewas for a strip of land four miles in width along the western bank of the Niagara River. This strip comprises the greater parts of the Townships of Lincoln, Stamford, Willoughby and Bertie.

(Morris 1943:15)

As demonstrated above, the nature of Indigenous settlement size, population distribution, and material culture shifted as European settlers encroached upon their territory. Despite this shift, however, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to ... systems of ideology and thought” (Ferris 2009:114). As a result, Indigenous peoples have left behind archaeological resources throughout southern Ontario which show continuity with past peoples, even if they have not been recorded in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The study area is located on part of Lots 43, 44, 66 and 67, Former Township of Thorold, former Welland County, Ontario. The Euro-Canadian settlement history of the region of the study area is summarized below.

In 1791, the Provinces of Upper Canada and Lower Canada were created from the former Province of Quebec by an act of British Parliament. At this time, Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Petryshyn 1985). In 1792, Simcoe divided Upper Canada into 19 counties consisting of previously settled lands, new lands opened for settlement, and lands not yet acquired by the Crown. These new counties stretched from Essex in the west to Glengarry in the east.

1.2.2.1 Welland County

Welland County was originally part of Lincoln County which was one of the original 19 counties of Upper Canada created in 1792. By 1841 Lincoln County was a county municipality, administered by a District Council whose headquarters were located at Niagara-on-the-Lake. In 1851 the southern section of the



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county broke away to be governed by a provisional council under Warden John Fraser and formed Welland County (Mika and Mika 1983:612).

1.2.2.2 Thorold Township

The Township of Thorold was formed in 1788 when the area was laid out in 100-acre lots by surveyor Augustus Jones to provide land for Loyalist refugees and disbanded soldiers following the American Revolutionary War. Although originally called Township Number 9, in 1793 the township was renamed Thorold after Sir John Thorold, an English baronet and Member of Parliament in the newly formed government of Upper Canada (Thompson 1898). The first communities included St. Johns, Beaverdams, and DeCew Falls. However, after the opening of the First Welland Canal in 1829 the original settlements fell into decline, in favour of the new canal villages of Thorold, Allanburg, and Port Robinson (Jackson 1997). The community of Thorold soon became dominant in the area and was incorporated as a village in 1850 and as a town in 1870.

1.2.2.3 Upper Family Burial Ground

The Upper Family Burial Ground is located approximately 240 m northeast of the study area. The majority of the extant headstones in the cemetery belong to the Upper family (Ontario Genealogical Society 1984). The cemetery may have been a family cemetery, however, historic mapping does indicate a church associated with the cemetery's location (see Section 1.2.2.4). The earliest known burial in the cemetery dates to 1840, with the final known burial dated 1974 (Ontario Genealogical Society 1984). The cemetery is privately owned and not registered with the Bereavement Authority of Ontario (Bereavement Authority of Ontario 2022).

1.2.2.4 Historical Map Review

In discussing 19th century mapping it must be remembered that many historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). As such, structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

Further, review of historical mapping has inherent accuracy difficulties due to potential error in georeferencing. Georeferencing is conducted by assigning spatial coordinates to fixed locations and using these points to spatially reference the remainder of the map. Due to changes in "fixed" locations over time (e.g., road intersections, road alignments, water courses, etc.), errors/difficulties of scale and the relative idealism of historical cartography, historical maps may not translate accurately into real space points. This may provide obvious inconsistencies during historical map review.

The 1862 *Tremaine's Map of the Counties of Lincoln and Welland, Canada West* (Tremaine and Tremaine 1862) was reviewed as part of this assessment (Figure 4). Land tenure information from this map is summarised in Table 1.



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Table 1: 1862 Landowner Information for Study Area

Lot	Landowner	Comment
43	Martin Upper	No features indicated
44	Martin Upper	No features indicated
66	Andrew Upper	No features indicated
67	A. Upper	No features indicated

The 1876 *Illustrated Historical Atlas of Counties of Lincoln and Welland, Ont.* (H.R. Page & Co. 1876) was also reviewed (Figure 5). Land tenure information from this map is summarised in Table 2.

Table 2: 1876 Landowner Information for Study Area

Lot	Landowner	Comment
43	J. Upper Andrew Upper None given	Two houses shown in north end of lot, outside of study area House, two orchards and a church shown in the north end of the lot, outside of study area House shown in small lot at intersection of Beaverdams Road and Thorold Townline
44	J. Upper	Three orchards indicated at north end of lot, outside of study area
66	J. Upper Andrew Upper	No features indicated No features indicated
67	J. Upper Alex Fraser	No features indicated No features indicated

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 The Natural Environment

The study area is situated within the Haldimand Clay Plain physiographic region (Chapman and Putnam 1984). The Haldimand Clay Plain, which was previously the bed of Lake Warren, consists of till that emerged from layers of stratified clay in low morainic ridges (Chapman and Putnam 1984). The northern portion of the region has more varied topography than the southern part (Chapman and Putnam 1984). Clay plains are glaciolacustrine features and are deposited by lower energy, deep waters and indicate former lakebeds (Karrow and Warner 1990:5).

The study area is composed of the following soils: Beverley silty clay, Beverley silty clay with Toledo silty clay, Niagara clay, Niagara clay with Welland clay, and Toledo silty clay (Ontario Institute of Pedology 1989). All of these soils are imperfectly to poorly drained soils. Niagara, Toledo, and Welland soils are rated between poor to unsuitable for traditional Indigenous agricultural crops (i.e., corn, beans, and squash). Beverly soils are rated as generally fair for traditional Indigenous agricultural crops with management of soil drainage (Kingston and Presant 1989:24-25, 32, 36 and 39-94). Traditional mound field systems may have improved soil structure and drainage (Birch and Williamson 2013:93-95).

The study area includes seasonal tributaries of Beaver Dams Creek that drain north to Beaver Dams Creek, which now empties into the Welland Canal. However, in its natural state Beaver Dams Creek was



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a tributary of Twelve Mile Creek which drained north, over the Niagara Escarpment and then into Lake Ontario. The hydrography of the study area, and the region more generally, has been significantly altered by the construction of the various Welland Canals and associated reservoirs.

1.3.2 Pre-contact Indigenous Resources

As the Laurentide ice sheet receded from southern Ontario by approximately 11,000 years ago, the land was opened up and those parts of it not submerged under glacial lakes were available for human occupation (Ellis and Ferris 1990; Lothrop *et al.* 2016). Much of what is understood about the lifeways of the Indigenous peoples who first populated the land that is currently known as southern Ontario is derived from archaeological evidence and ethnographic analogy.

In Ontario, Indigenous occupation prior to the period of contact with European peoples has been divided by archaeologists into archaeological culture periods based on observed changes in material culture. These archaeological culture periods are largely based on observed changes in formal lithic tools, and are classified as Early Paleo, Late Paleo, Early Archaic, Middle Archaic, and Late Archaic periods. Following the advent of ceramic technology in the Indigenous archaeological record in Ontario, archaeological culture periods are classified as Early Woodland, Middle Woodland, and Late Woodland periods, distinguished primarily on observed changes in formal ceramic decoration. It should be noted that archaeological culture periods do not represent specific Indigenous cultural identities but are, rather, a useful paradigm for categorizing changes in Indigenous material culture practice through time.

The current understanding of Indigenous archaeological culture periods in southern Ontario is summarized in Table 3, based on Ellis and Ferris (1990) and more recent advances in late Pleistocene radiocarbon calibration techniques (Ellis 2013; Lothrop *et al.* 2016; Munson 2013). The provided time periods are based on the “Common Era” calendar notation system, i.e., Before Common Era (BCE) and Common Era (CE).

Table 3: Generalized Pre-contact Indigenous Cultural Chronology of the Project Area

Period	Characteristics	Time Period	Comments
Early Paleo	Fluted Projectiles	9000 – 8400 BCE	Spruce parkland/caribou hunters
Late Paleo	Hi-Lo Projectiles	8400 – 8000 BCE	Smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 – 6000 BCE	Slow population growth
Middle Archaic	Brewerton-like points	6000 – 2500 BCE	Environment similar to present
Late Archaic	Narrow Points	2500 – 1800 BCE	Increasing site size
	Broad Points	1800 – 1500 BCE	Large chipped lithic tools
	Small Points	1500 – 1100 BCE	Introduction of bow hunting
Terminal Archaic	Hind Points	1100 – 950 BCE	Emergence of true cemeteries
Early Woodland	Meadowood Points	950 – 400 BCE	Introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 BCE – 500 CE	Increased sedentism
	Princess Point	550 – 900 CE	Introduction of corn
Late Woodland	Early Ontario Iroquoian	900 – 1300 CE	Emergence of agricultural villages



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Period	Characteristics	Time Period	Comments
	Middle Ontario Iroquoian	1300 – 1400 CE	Long longhouses (100+ metres)
	Late Ontario Iroquoian	1400 – 1650 CE	Tribal warfare and displacement

Between 9000 and 8000 BCE, Indigenous populations were sustained by hunting, fishing, and foraging and lived a relatively mobile existence across an extensive geographic territory. Despite these wide territories, social ties were maintained between groups. One method of maintaining social ties was through gift exchange, evident through exotic lithic material documented on many sites (Ellis 2013:35-40).

By approximately 8000 BCE, evidence exists and becomes more common for the production of ground-stone tools such as axes, chisels, and adzes. These tools themselves are believed to be indicative specifically of woodworking. This evidence can be extended to indicate an increase in craft production and arguably craft specialization. This latter statement is also supported by evidence, dating to approximately 7000 BCE of ornately carved stone objects which would be laborious to produce and have explicit aesthetic qualities (Ellis 2013:41). This is indirectly indicative of changes in social organization which permitted individuals to devote time and effort to craft specialization. Since 8000 BCE, the Great Lakes basin experienced a low-water phase, with shorelines significantly below modern lake levels (Stewart 2013: Figure 1.1.C). It is presumed that the majority of human settlements would have been focused along these former shorelines. At approximately 6500 BCE the climate had warmed considerably since the recession of the glaciers and the environment had grown more similar to the present day. By approximately 4500 BCE, evidence exists from southern Ontario for the utilization of native copper (naturally occurring pure copper metal) (Ellis 2013:42). The known origin of this material along the north shore of Lake Superior indicates the existence of extensive exchange networks across the Great Lakes basin.

At approximately 3500 BCE, the isostatic rebound of the North American plate following the melt of the Laurentide glacier had reached a point which significantly affected the watershed of the Great Lakes basin. Prior to this, the Upper Great Lakes had drained down the Ottawa Valley via the French-Mattawa River valleys. Following this shift in the watershed, the drainage course of the Great Lakes basin had changed to its present course. This also prompted a significant increase in water-level to approximately modern levels (with a brief high-water period); this change in water levels is believed to have occurred catastrophically (Stewart 2013:28-30). This change in geography coincides with the earliest evidence for cemeteries (Ellis 2013:46). By 2500 BCE, the earliest evidence exists for the construction of fishing weirs (Ellis *et al.* 1990: Figure 4.1). Construction of these weirs would have required a large amount of communal labour and are indicative of the continued development of social organization and communal identity. The large-scale procurement of food at a single location also has significant implications for permanence of settlement within the landscape. This period is also marked by further population increase and by 1500 BCE evidence exists for substantial permanent structures (Ellis 2013:45-46).

By approximately 950 BCE, the earliest evidence exists for populations using ceramics. Populations are understood to have continued to seasonally exploit natural resources. This advent of ceramic technology correlated, however, with the intensive exploitation of seed foods such as goosefoot and knotweed as well as mast such as nuts (Williamson 2013:48). The use of ceramics implies changes in the social organization of food storage as well as in the cooking of food and changes in diet. Fish also continued to



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be an important facet of the economy at this time. Evidence continues to exist for the expansion of social organization (including hierarchy), group identity, ceremonialism (particularly in burial), interregional exchange throughout the Great Lakes basin and beyond, and craft production (Williamson 2013:48-54).

By approximately 550 CE, evidence emerges for the introduction of maize into southern Ontario. This crop would have initially only supplemented Indigenous peoples' diet and economy (Birch and Williamson 2013:13-14). Maize-based agriculture gradually became more important to societies and by approximately 900 CE permanent communities emerge which are primarily focused on agriculture and the storage of crops, with satellite locations oriented toward the procurement of other resources such as hunting, fishing, and foraging. By approximately 1250 CE, evidence exists for the common cultivation of historical Indigenous cultigens, including maize, beans, squash, sunflower, and tobacco. The extant archaeological record demonstrates many cultural traits similar to historical Indigenous nations (Williamson 2013:55).

The study area is located within the understood territory of the ancestral Neutral Nation (Birch 2015). Specifically, the study areas are located near the well-documented Eastern Niagara Escarpment settlement cluster attributed to the pre-contact Neutral Nation. The pre-contact component of the Eastern Niagara Escarpment settlement cluster has documented occupation from the 16th to 17th centuries (Lennox and Fitzgerald 1990: Table 13.1).

1.3.3 Registered Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MTCS who maintain the *Ontario Archaeological Sites Database*. The study area under review is within Borden Block: AgGt.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990a). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MTCS will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the *Ontario Archaeological Sites Database* has shown that there are 45 archaeological sites registered within a one-kilometre radius of the study area (Government of Ontario 2022a). Table 4



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summarizes the registered archaeological sites within one kilometre of the study area. Sites located within 300 m of the study area are **bolded** and discussed further below. Only one site, AgGt-261, is located within 70 m of the study area.

Table 4: Registered Archaeological Sites within One Kilometre

Borden Number	Site Name	Cultural Affiliation	Site Type
AgGs-347	AgGs-347-P15-P24	Indigenous (Late Paleo and Late Archaic periods)	Undetermined
AgGs-348	AgGs-348-P40	Indigenous (pre-contact period)	Undetermined
AgGs-411	Walker XI	Euro-Canadian	Homestead
AgGs-427	Walker XII	Indigenous (pre-contact period); Euro-Canadian	Artifact scatter; midden
AgGs-428	Walker XVII	Indigenous (pre-contact period)	Artifact scatter
AgGs-429	Walker XXIII	Indigenous (Early Archaic period)	Findspot
AgGs-430	Walker XVI	Indigenous (pre-contact period)	Artifact scatter
AgGt-72	Blackhorse Valve	Indigenous (pre-contact period)	Findspot
AgGt-93	n/a	Indigenous (Archaic period)	Campsite
AgGt-94	n/a	Indigenous (Archaic period)	Artifact scatter
AgGt-95	n/a	Indigenous (Archaic period)	Artifact scatter
AgGt-130	T Brown	Euro-Canadian	Homestead
AgGt-131	Robert Spencer	Euro-Canadian	Homestead
AgGt-132	B. Williams	Euro-Canadian	Homestead
AgGt-133	K Smith	Euro-Canadian	Homestead
AgGt-134	n/a	Indigenous (pre-contact period)	Findspot
AgGt-135	n/a	Indigenous (pre-contact period)	Findspot
AgGt-136	n/a	Indigenous (pre-contact period)	Findspot
AgGt-137	n/a	Indigenous (pre-contact period)	Findspot
AgGt-138	n/a	Indigenous (pre-contact period)	Findspot
AgGt-139	Glen Gordon 1	Indigenous (Late Woodland periods); Euro-Canadian	Undetermined; farmstead
AgGt-140	Glen Gordon 2	Indigenous (pre-contact period)	Artifact scatter
AgGt-141	Glen Gordon 3	Indigenous (pre-contact period)	Artifact scatter
AgGt-142	Glen Gordon 4	Indigenous (pre-contact period)	Artifact scatter
AgGt-175	Walker II	Indigenous (pre-contact period)	Artifact scatter
AgGt-176	Walker X	Indigenous (Middle Archaic and Early Woodland periods); Euro-Canadian	Artifact scatter
AgGt-177	Walker VI	Indigenous (pre-contact period)	Undetermined
AgGt-178	Walker IX	Indigenous (pre-contact period)	Campsite



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Borden Number	Site Name	Cultural Affiliation	Site Type
AgGt-179	Walker I	Indigenous (Late Archaic period)	Undetermined
AgGt-180	Walker III	Indigenous (pre-contact period)	Undetermined
AgGt-181	Walker IV	Indigenous (pre-contact period)	Undetermined
AgGt-182	Walker V	Indigenous (pre-contact period)	Undetermined
AgGt-183	Walker VII	Indigenous (Early Archaic period)	Undetermined
AgGt-184	Walker VIII	Indigenous (pre-contact period)	Undetermined
AgGt-260	n/a	Indigenous (Late Paleo period)	Campsite
AgGt-261	Joy	Indigenous (Late Woodland period)	Findspot
AgGt-271	Walker XIII	Indigenous (pre-contact period); Euro-Canadian	Artifact scatter
AgGt-272	Walker XIV	Indigenous (pre-contact period)	Campsite
AgGt-273	Walker XV	Indigenous (pre-contact period)	Campsite
AgGt-274	Walker XVIII	Indigenous (pre-contact period)	Artifact scatter
AgGt-275	Walker XIX	Indigenous (pre-contact period)	Artifact scatter
AgGt-276	Walker XX	Indigenous (pre-contact period); Euro-Canadian	Artifact scatter
AgGt-278	Walker XXI	Indigenous (pre-contact period); Euro-Canadian	Artifact scatter
AgGt-292	n/a	Indigenous (pre-contact period)	Artifact scatter
AgGt-293	n/a	Indigenous (pre-contact period)	Artifact scatter

In addition to the above, an examination of the *Ontario Public Register of Archaeological Reports* (Government of Ontario 2022b) has identified two previous archaeological assessments which document work within 50 metres of the study area.

AMICK Consultants Limited (2006) completed Stage 1-3 archaeological assessment of a proposed draft plan of subdivision in part of Lots 68-70, and 90-92 in the Town of Thorold, Regional Municipality of Niagara on behalf of Rolling Meadows under the project direction of Michael Henry (Project Information Form [PIF] No. P058-077). This archaeological assessment did not survey or comment on the archaeological potential of the current study area. This assessment identified 13 archaeological sites, none of which are located within 70 m of the current study area.

A.M. Archaeological Associates (2018) completed a Stage 1-2 archaeological of part of Lot 67 Uppers Lane, including part of the road allowance between Lots 67 and 68 in the City of Thorold, Regional Municipality of Niagara on behalf of Farz Holdings Inc. care-of LARKIN+ Land Use Planners under the project direction of Andrew Murray (PIF No. P035-0277-2018). This archaeological assessment did not survey or comment on the archaeological potential of the current study area. This assessment identified seven archaeological sites. One of these sites (site AgGt-261) is located within 70 m of the current study area. Site AgGt-261 consisted of a single Levanna-type projectile point which dates to the Late Woodland period. This site was recommended as not requiring any further work.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Project Context

1.3.4 Niagara Region Archaeological Management Plan

Niagara Region's draft municipal Archaeological Management Plan, Niagara Region Archaeological Management Plan: Phase 5 Report – DRAFT (Archaeological Services Inc. [ASI] and Letourneau Heritage Consulting Inc. [LHC] 2021) was consulted as part of the background research for this archaeological assessment. The draft Archaeological Management Plan mapping showing areas of archaeological potential within Niagara Region. This Plan indicates that the study area is located within an area deemed as retaining archaeological potential.

1.4 EXISTING CONDITIONS

The study area is located within the Rolling Meadows Secondary Plan development area in the City of Thorold, Ontario (City of Thorold 2015). The property is classified under this Secondary Plan as greenfield land use. The property consists of three agricultural fields and a large woodlot. Overall, the study area is approximately 40.04 ha in area.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Field Methods

2.0 FIELD METHODS

No property inspection was completed as part of this Stage 1 archaeological assessment.



3.0 ANALYSIS AND CONCLUSIONS

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by the MTCS (Government of Ontario 2011) to determine areas of archaeological potential within the study area. These variables include proximity to registered archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area. However, it is worth noting that extensive land disturbance can eradicate archaeological potential (Government of Ontario 2011).

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site locations. Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential.

As discussed above, distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site location and type to varying degrees. The MTCS categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, and creeks.
- Secondary water sources: intermittent streams and creeks, springs, marshes, and swamps.
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, and shorelines of drained lakes or marshes.
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, and sandbars stretching into marsh.

As stated in Section 1.3.1, the study area includes seasonal tributaries of Beaver Dams creeks. The majority of soils in the study area would have been poorly suited to unsuitable for traditional Indigenous agricultural crops. Some of the soils (i.e., Beverly silty clay soils) may have been suited to traditional Indigenous agricultural crops when employing traditional Indigenous field systems.

Archaeological potential can also be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990b) or property that local histories or informants have identified with possible historical events, activities, or occupations. Historical mapping demonstrates that the study area was historically occupied but no specific historical features are indicated.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Analysis and Conclusions

The draft Niagara Region Archaeological Management Plan (ASI and LHC 2021) indicates the study area as possessing archaeological potential.

When the above listed criteria are collectively applied, the entire study area retains potential for the identification of Indigenous and Euro-Canadian archaeological resources.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Recommendations

4.0 RECOMMENDATIONS

The Stage 1 archaeological assessment, involving desktop background research, determined that the entire study area retains archaeological potential (Figure 6). Thus, in accordance with Section 1.3.1 and Section 7.7.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended for the entire study area.**

The objective of the Stage 2 archaeological assessment will be to document archaeological resources within the study area and to determine whether these archaeological resources require further assessment. The Stage 2 archaeological assessment of the study area may consist of a combination of pedestrian survey and test pit survey (Figure 6). The pedestrian survey of agricultural fields and accessible lands will entail the systematic walking of open ploughed fields at five metre intervals as outline in Section 2.1.1 of the MHTSCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Area to be subjected to test pit survey that are within woodlots, scrubland, pasture, or areas that cannot be ploughed will be assessed according to Section 2.1 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). If the archaeological field team judges any lands to be low and wet, steeply sloped, or disturbed during the course of the Stage 2 fieldwork, those areas will not require physical survey, but will be photographically documented instead, in accordance with Section 2.1 of the MHTSCIs 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

If the archaeological field team judges any lands to be low and wet, steeply sloped, or disturbed during the course of the Stage 2 field work, those areas will not require survey, but will be photographically documented instead in accordance with Section 2.1 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

The MTCS is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Advice on Compliance with Legislation

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c.0.18 (Government of Ontario 1990b). The report is reviewed to make sure 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.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990b) 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 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 Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990b).

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* (Government of Ontario 1990b). 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* (Government of Ontario 1990b).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002) requires that any person discovering human remains must notify the police or coroner and the Bereavement Authority of Ontario on behalf of the Ministry of Government and Consumer Service.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

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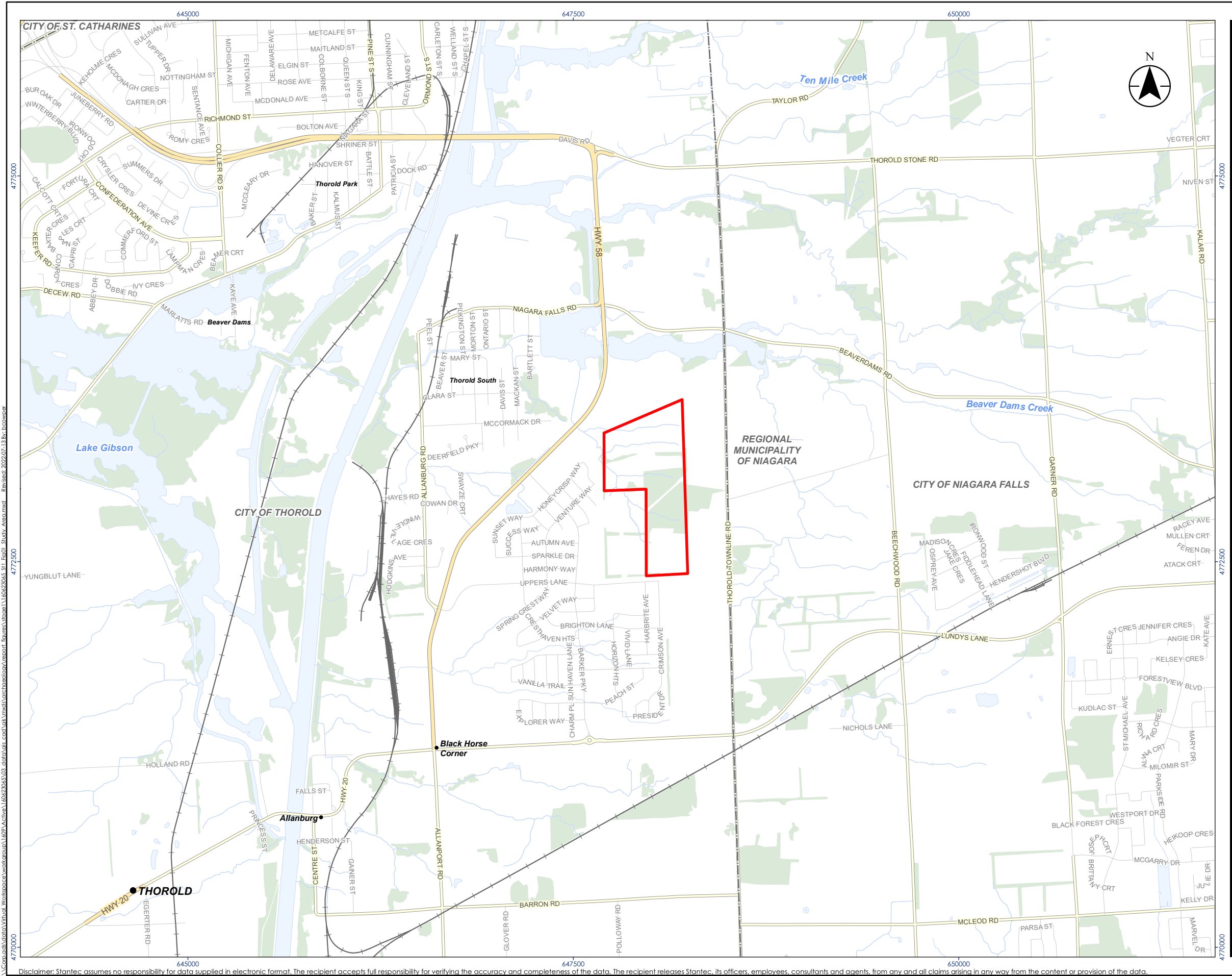
Maps

7.0 MAPS

General maps of the study area follow on succeeding pages.



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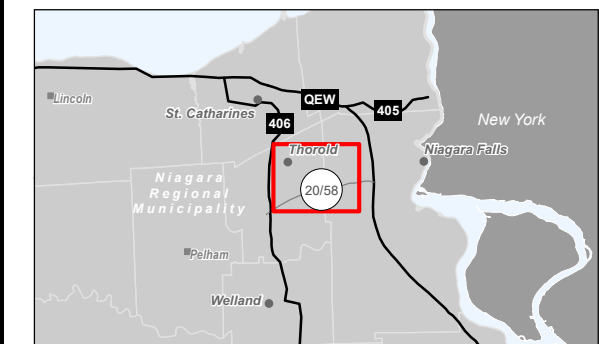


Legend

- Study Area (Approx.)
- Railway - Operational
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipal Boundary - Lower Tier
- Waterbody
- Wooded Area

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1:25,000 (At original document size of 11x17)

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
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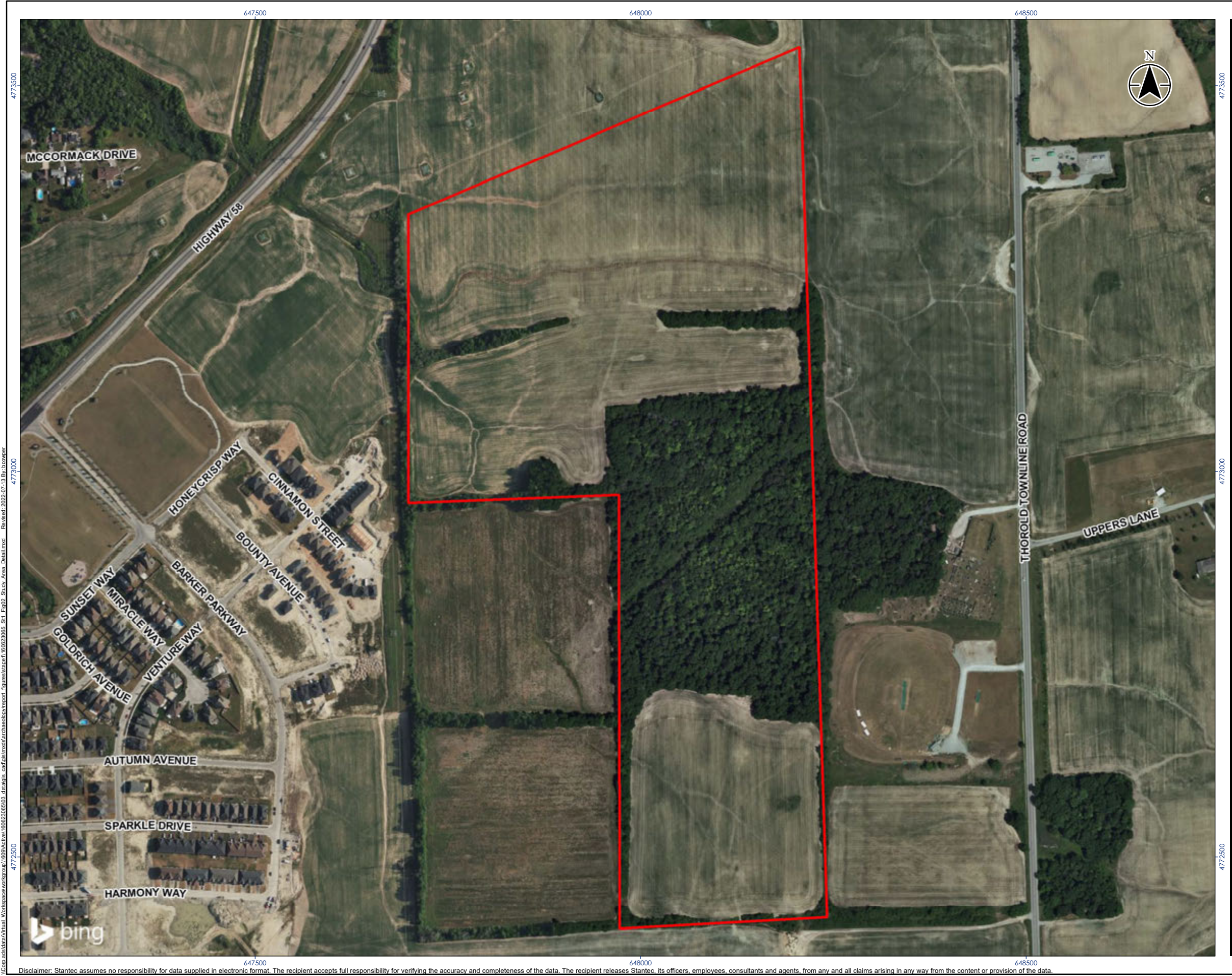
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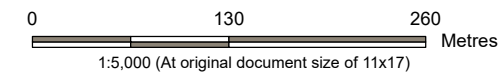
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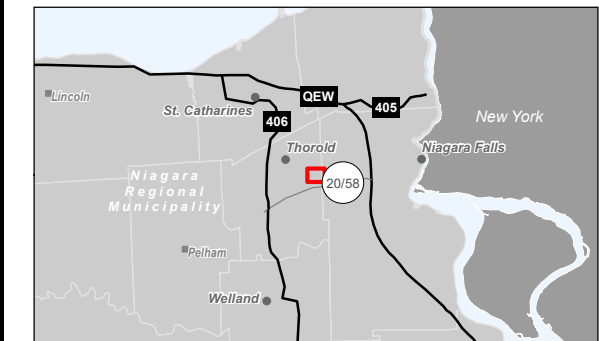


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Study Area (Approx.)



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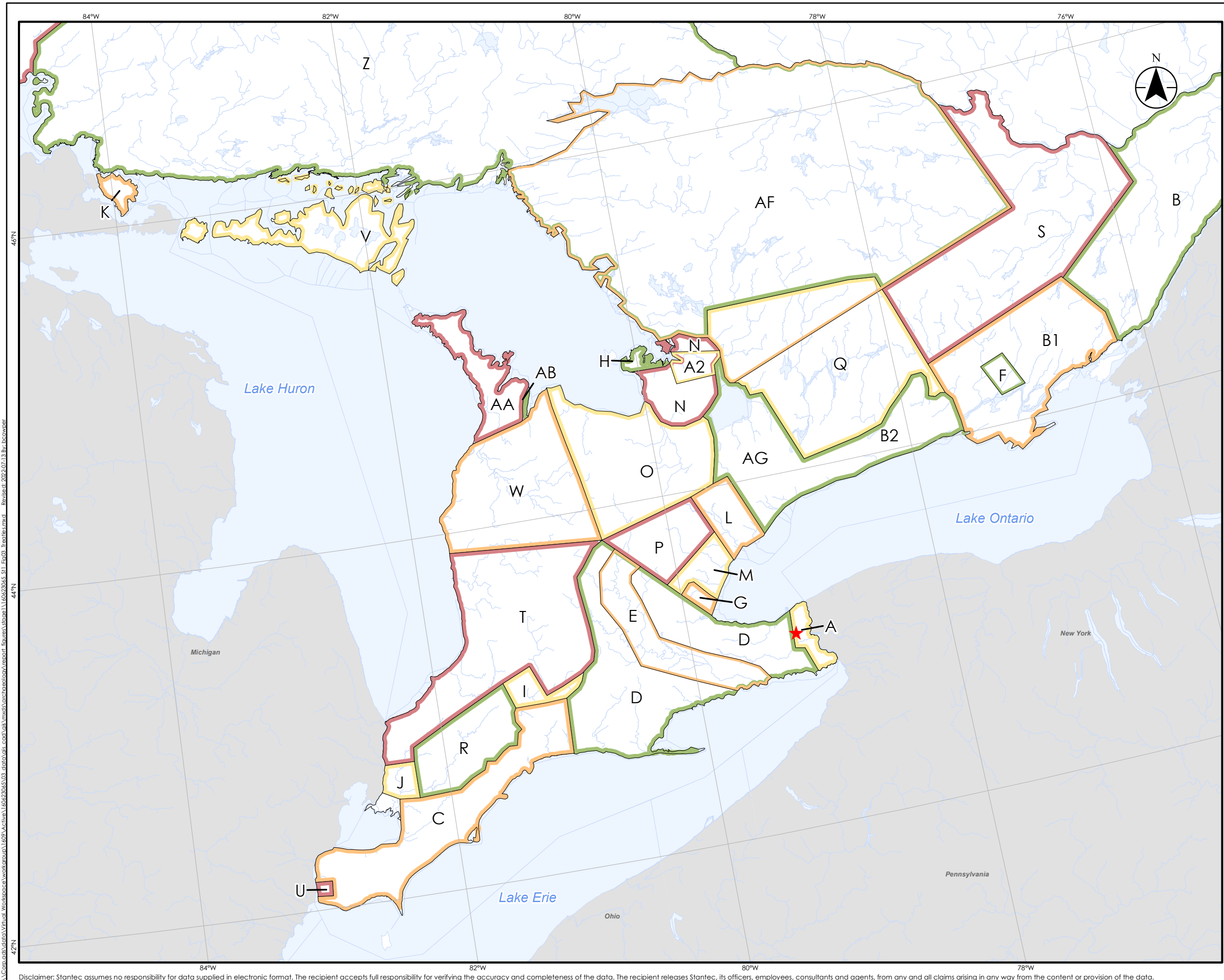
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STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

2

Title

Detailed Study Area Location



- Legend
- ★ Study Area
 - Watercourse
 - Waterbody

Ontario Treaties (from Morris 1943)		
A : Treaty No. 381, May 9th, 1781 (Mississauga and Chippewa)	D : Treaty No. 3, December 2nd, 1792 (Mississauga)	O : Treaty No. 18, October 17th, 1818 (Chippewa)
A2 : John Collins' Purchase, 1785 (Chippewa)	E : Haldimand Tract: from the Crown to the Mohawk, 1793	P : Treaty No. 19, October 28th 1818 (Chippewa)
AA : Treaty No. 72, October 30th, 1854 (Chippewa)	F : Tyendinaga: from the Crown to the Mohawk, 1793	Q : Treaty No. 20, November 5th, 1818 (Chippewa)
AB : Treaty No. 82, February 9th, 1857 (Chippewa)	G : Treaty No. 3 3/4: from the Crown to Joseph Brant, October 24th, 1795	R : Treaty No. 21, March 9th, 1819 (Chippewa)
AG : Williams Treaty, October 31st, 1923 (Chippewa)	H : Treaty No. 5, May 22nd, 1798 (Chippewa)	S : Treaty No. 27, May 31st, 1819 (Mississauga)
B : Crawford's Purchase, October 9th, 1783 (Algonquin and Iroquois)	I : Treaty No. 6, September 7th, 1796 (Chippewa)	T : Treaty No. 27½, April 25th, 1825 (Ojibwa and Chippewa)
B1 : Crawford's Purchase, October 9th, 1783 (Mississauga)	J : Treaty No. 7, September 7th, 1796 (Chippewa)	U : Treaty No. 35, August 13th, 1833 (Wyandot or Huron)
B2 : Crawford's Purchase, 1783, 1787, 1788 (Mississauga)	K : Treaty No. 11, June 30th, 1798 (Chippewa)	W : Treaty No. 45½, August 9th, 1836 (Saugeen)
C : Treaty No. 2, May 19th, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)	L : Treaty No. 13, August 1st, 1805 (Mississauga)	Y : Treaty No. 60, Robinson, Superior, September 7th, 1850 (Ojibwa)
	M : Treaty No. 13A, August 2nd, 1805 (Mississauga)	Z : Treaty No. 61, Robinson, Huron, September 9th, 1850 (Ojibwa)
	N : Treaty No. 16, November 18th, 1815 (Chippewa)	

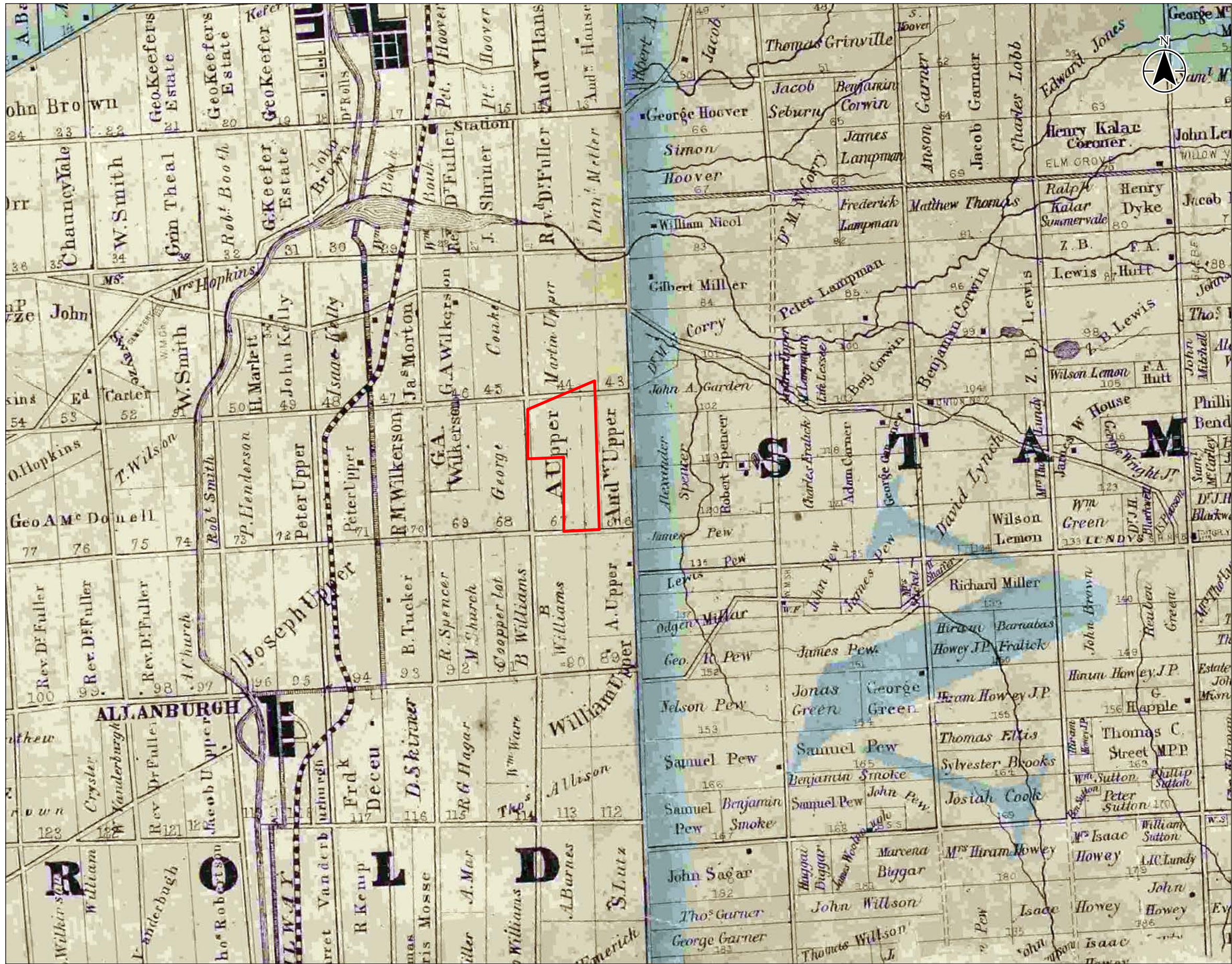
- Notes
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 3. Treaty boundaries adapted from Morris 1943 (1964 reprint).

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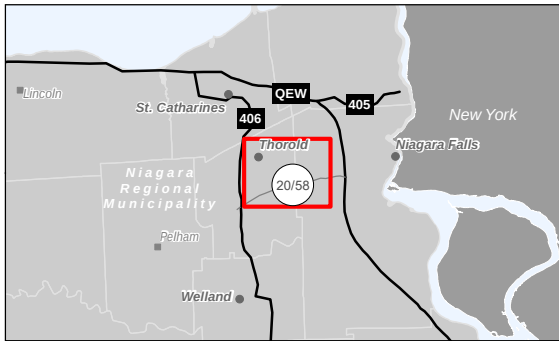
Figure No.
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**Treaties and Purchases
(Adapted from Morris 1943)**

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Revised: 2022-07-13 By: bcooper



Study Area

- Notes
1. Historic image not to scale.
 2. Reference: Tremaine, Geo. R. and Tremaine, G.M. 1862. Tremaine's Map of the Counties of Lincoln and Welland, Canada West. Toronto: Geo. R. & G.M. Tremaine.



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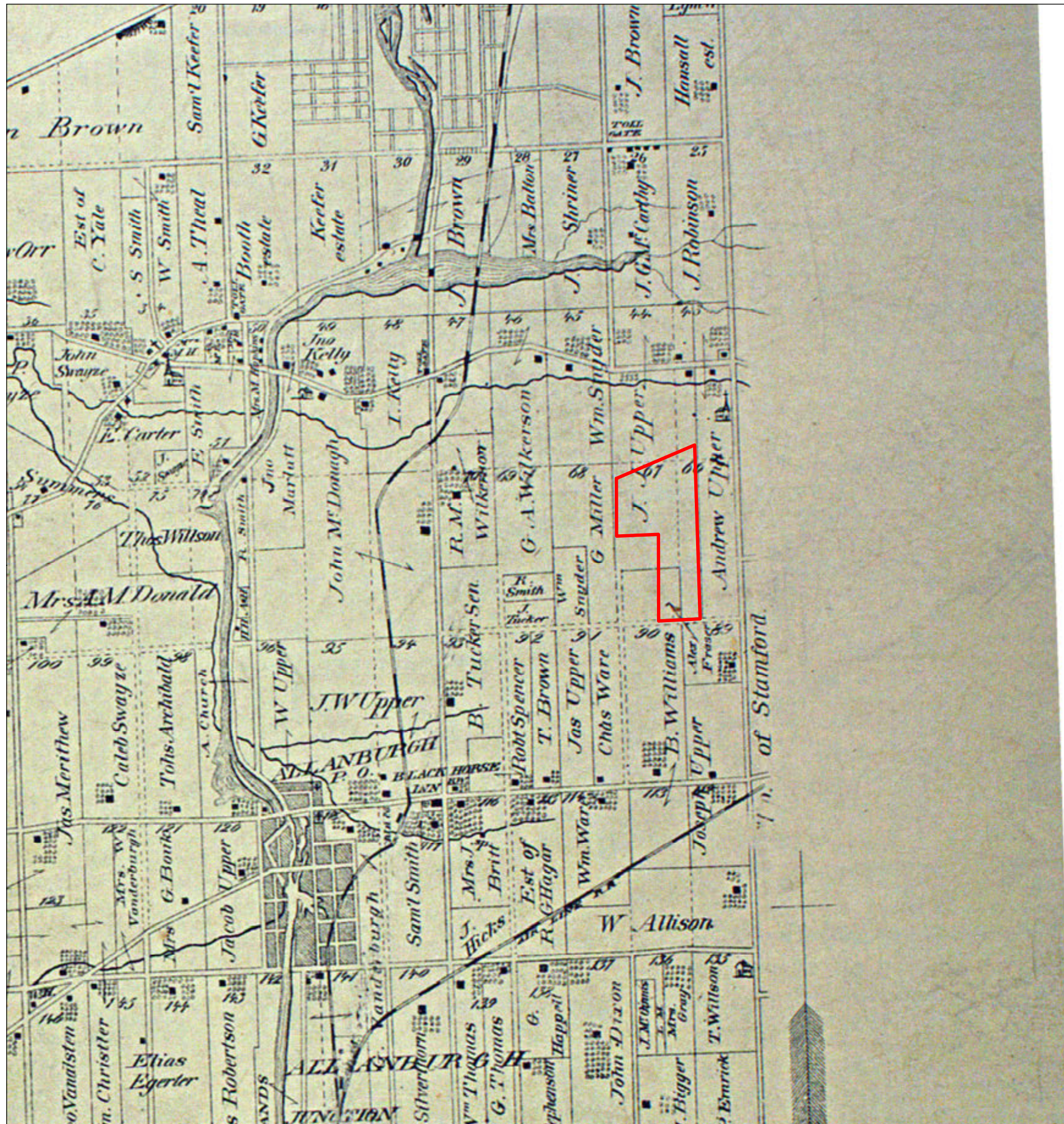
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FOREST STREET, MINDEMOYA
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
4

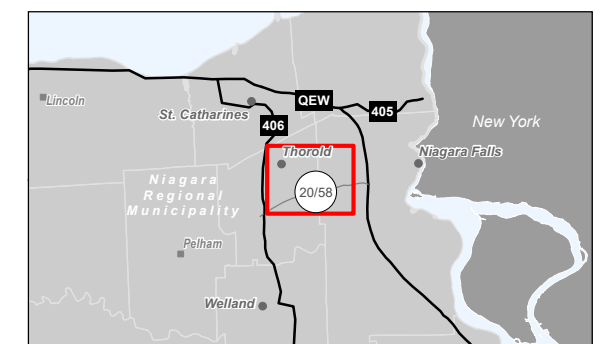
Title
Portion of 1862 Map of Counties of Lincoln and Welland, Canada West

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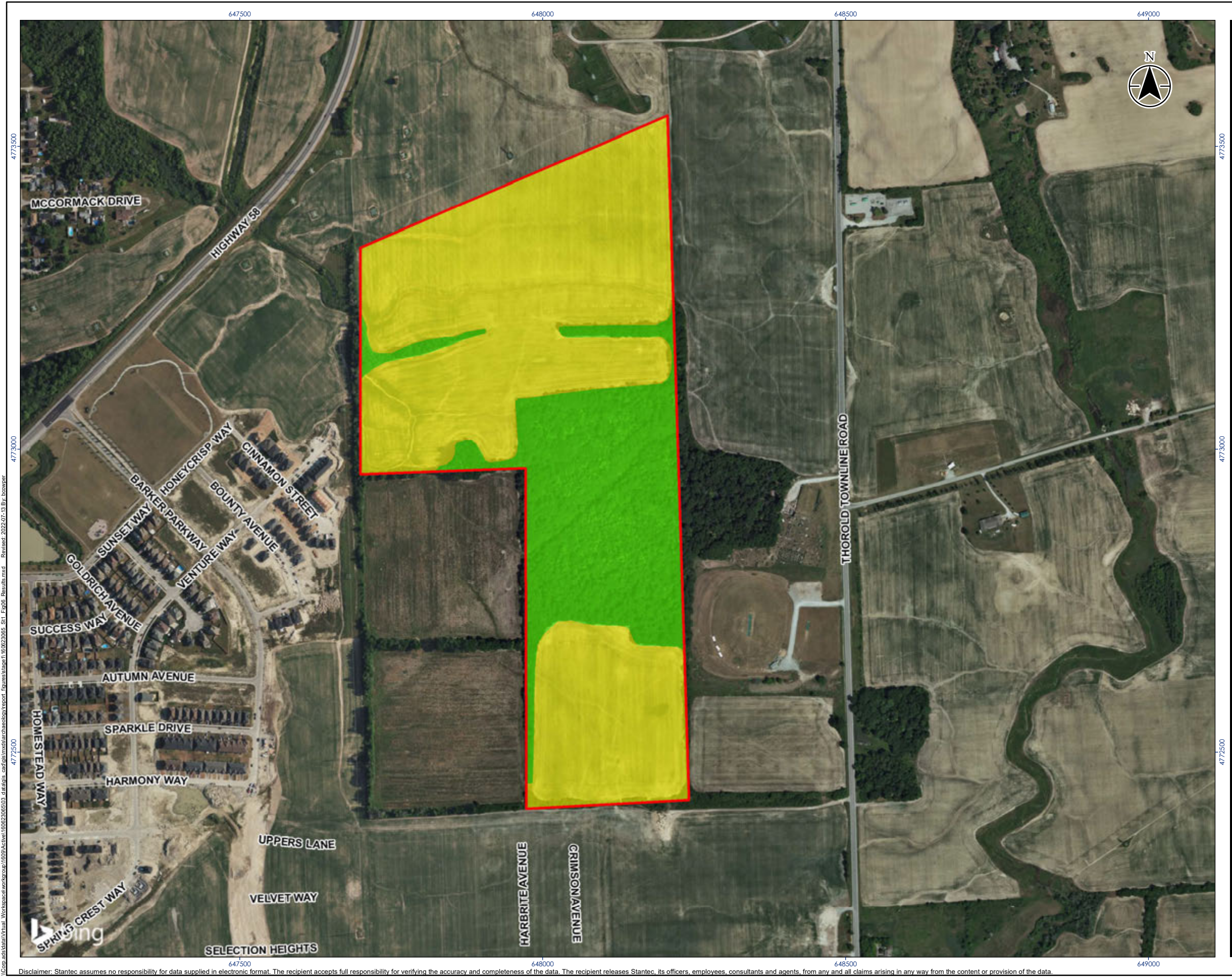
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INFRASTRUCTURE ONTARIO
FOREST STREET, MINDEMOYA
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

5

Title
Portion of the 1876 Map of Township of Thorold





Legend

Study Area (Approx.)

Stage 2 Archaeological Assessment Recommendations

Pedestrian Survey at 5 m Intervals

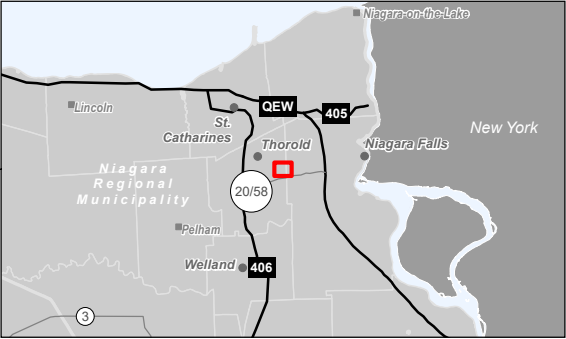
Test-Pit Survey at 5 m Intervals

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Notes

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Client/Project
PARKBRIDGE LIFESTYLE COMMUNITIES INC.
UPPER'S GROVE, THOROLD
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
6

Title
Stage 1 Results and Recommendations

STAGE 1 ARCHAEOLOGICAL ASSESSMENT: ROLLING MEADOWS DUE DILIGENCE

Closure

8.0 CLOSURE

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Quality Review _____

(signature)

Colin Varley – Senior Associate, Senior Archaeologist

Independent Review _____

(signature)

Tracie Carmichael – Managing Principal, Environmental Services

