

**Stage 2 Archaeological Assessment,
450 Rice Road, Welland**

Part of Lot 174, Geographic Township of Thorold,
Historical County of Welland, now the City of Welland,
Region of Niagara

Submitted to:

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and

Ontario's Ministry of Citizenship and Multiculturalism

Submitted by:



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ORIGINAL REPORT

December 09, 2022

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Mr. Matt Vartanian of Mountainview Homes ('the Proponent') to conduct a Stage 2 archaeological assessment on Part of Lot 174, Geographic Township of Thorold, Historical County of Welland, now the City of Welland, Region of Niagara, Ontario ('Study Area'; Figure 1). This assessment was undertaken in advance of a proposed residential development ('Development Map'; Figure 4).

The assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet the condition, a Stage 2 assessment of the Study Area was conducted during the application phase of the proposed a proposed residential development, under archaeological consulting license P017 issued to Mr. Garth Grimes by the Ministry of Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and the MCM/MHSTCI 2011 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'); (Government of Ontario 2011).

The assessment property measured 4 hectares ('ha'). At the time of the assessment, the property comprised a residential house, pavement driveway, manicured lawn, agricultural field and culvert drain area (Figure 3). The Study Area made up the entirety of the assessment property and formed a rectangular shaped area. The Study Area was bound by road access frontage onto Rice Road to the west with neighbouring residential lots to the south and north, and agricultural lands to the east. The limits of the Study Area were surveyed and marked by the Proponent prior to the assessment.

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources; therefore, a Stage 2 assessment was recommended for the manicured lawn and agricultural field portions of the Study Area. The residential house and pavement driveway was determined to retain low or no archaeological potential based on the Stage 2 identification of extensive a deep land alteration that has severely damaged the integrity of archaeological resources. The previously disturbed areas, as confirmed during a Stage 2 property inspection, were mapped and photo documented only.

The subsequent Stage 2 assessment conducted on September 16th, 2022, involved a test pit survey at 5m intervals of the manicured lawn areas. This investigation resulted in the identification and documentation of no archaeological resources.

The Stage 2 assessment of the Study Area resulted in the identification of no archaeological resources; therefore, no additional archaeological assessment of the Study Area is recommended.

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Project Personnel

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Project Acknowledgements

Generous contributions by Mr. Matt Vartanian of Mountainview Homes for making this report possible.

1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Mr. Matt Vartanian of Mountainview Homes ('the Proponent') to conduct a Stage 2 archaeological assessment on Part of Lot 174, Geographic Township of Thorold, Historical County of Welland, now the City of Welland, Region of Niagara, Ontario ('Study Area'; Figure 1). This assessment was undertaken in advance of a proposed residential development ('Development Map'; Figure 4).

The assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet the condition, a Stage 2 assessment of the Study Area was conducted during the application phase of the proposed residential development, under archaeological consulting license P017 issued to Mr. Garth Grimes by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and the MCM/MHSTCI 2011 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'); (Government of Ontario 2011).

The purpose of a Stage 1 Background Study is to compile all available information about the known and potential archaeological heritage resources within the Study Area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario 2011), the objectives of the following Stage 1 assessment are as follows:

- To provide information about the Study Area's geography, history, previous archaeological fieldwork and current land conditions;
- to evaluate in detail, the Study Area'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.

To meet these objectives Detritus archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the Study Area;
- a review of the land use history, including pertinent historic maps; and
- an examination of the Ontario Archaeological Sites Database ('ASDB') to determine the presence of known archaeological sites in and around the Study Area.

The purpose of a Stage 2 Property Assessment was to provide an overview of any archaeological resources within the Study Area, and to determine whether any of the resources might be archaeological sites with cultural heritage value or interest ('CHVI'), and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario 2011), the objectives of the following Stage 2 assessment are as follows:

- To document all archaeological resources within the Study Area;
- to determine whether the Study Area contains archaeological resources requiring further assessment; and
- to recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

1.2 Historical Context

1.2.1 Post-Contact Aboriginal Resources

Prior to the arrival of European settlers, much of the central and southern Ontario was occupied by Iroquoian speaking linguistic groups that had united to form confederacies, including the Huron-Wendat, the Neutral (or Attawandaran), and the Petun in Ontario, as well as the Five Nations Iroquois Confederacy in Upper New York State (Birch 2010; Warrick 2013). Of these groups, the Huron-Wendat established themselves to the east of the Niagara escarpment and the Neutral, to the west (Warrick 2000).

Throughout the middle of the 17th century, the Iroquois Confederacy sought to expand upon their territory and to monopolize the fur trade between the European markets and the tribes of the western Great Lakes region. A series of bloody conflicts followed known as the Beaver Wars or the French and Iroquois Wars, contested between the Iroquois Confederacy and the Algonkian speaking communities of the Great Lakes region. Many communities were destroyed including the Huron, Neutral, Susquehannock and Shawnee leaving the Iroquois as the dominant group in the region. By 1653 after repeated attacks, the Niagara peninsula and most of Southern Ontario had been vacated (Heidenreich 1990).

At this same time, the Anishinaabeg Nation, an Algonkian-speaking community situated inland from the northern shore of Lake Huron, began to challenge the Haudenosaunee for dominance in the Lake Huron and Georgian Bay region in order to advance their own role in the fur trade (Gibson 2006). The Algonkian-speaking groups that settled in the area bound by Lake Ontario, Lake Erie, and Lake Huron were referred to by the English as the Chippewas or Ojibwas. By 1680, the Ojibwa began expanding into the evacuated Huron-Wendat territory, and eventually into Southern Ontario. By 1701, the Haudenosaunee had been driven out of Ontario completely and were replaced by the Ojibwa (Gibson 2006; Schmalz 1991).

The late 17th and early 18th centuries also mark the arrival of an Ojibwa band known as the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes. **'The Mississaugas' is the name that the Jesuits had used in 1840 for the Algonquin community** living near the Mississagi River on the northwestern shore of Lake Huron (Smith 2002). The oral traditions of the Mississaugas, as recounted by Chief Robert Paudash and recorded in 1904, suggest that the Mississaugas defeated the Mohawk Nation, who retreated to their homeland south of Lake Ontario. Following this conflict, a peace treaty was negotiated between the two groups (Praxis Research Associates n.d.).

From the beginning of the 18th century until the end of the Seven Year War in 1763, the Ojibwa nation, including the Mississaugas, experienced a golden age in trade holding no alliance with either the French or the British (Schmalz 1991). At the end of the 17th century, the Mississaugas' settled permanently in Southern Ontario (Praxis Research Associates n.d.). Around this same time, in 1722, the Five Nation Iroquois Confederacy adopted the Tuscarora in New York becoming the Six Nations (Pendergast 1995).

The Study Area first entered the Euro-Canadian historical record on December 7th 1792 as part of **Treaty No. 3, which included land acquired in the 'Between the Lakes Purchase' dating to May 22, 1784**. According to the terms of the treaty, the Mississaugas ceded to the Crown approximately 3,000,000 acres of land between Lake Huron, Lake Erie and Lake Erie in return for trade goods valued at £1180. The limits of the Treaty 3 lands are documented as comprising...

Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties; Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County.

One of the stated objectives of the Between the Lakes Purchase was “to procure for that part of the Six Nation Indians coming into Canada a permanent abode” (Morris 1943: 17). Shortly after the transaction had been finalised in May of 1784, Sir Frederick Haldimand, the Governor of Québec, made preparations to grant a portion of land to those Six Nations who remained loyal to the Crown during the American War of Independence. More specifically, Haldimand arranged for the purchase of approximately 550,000 acres of land adjacent to the Treaty 3 limits from the Mississaugas. This tract of land, referred to as either the Haldimand Tract or the 1795 Crown Grant to the Six Nations, was provided for in the Haldimand Proclamation of October 25th, 1784 and was intended to extend a distance of six miles on each side of the Grand River from mouth to source (Weaver 1978). By the end of 1784, representatives from each constituent nation of the Six Nations, as well as other allies, relocated to the Haldimand Tract with Joseph Brant (Weaver 1978; Tanner 1987).

Throughout southern Ontario, the size and nature of the pre-contact settlements and the subsequent spread and distribution of Aboriginal material culture began to shift with the establishment of European settlers. By 1834 it was accepted by the Crown that losses of portions of the Haldimand Tract to Euro-Canadian settlers were too numerous for all lands to be returned. Lands in the Lower Grand River area were surrendered by the Six Nations to the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township (Page & Co. 1879; Weaver 1978; Tanner 1987). Following the population decline and the surrender of most of their lands along the Credit River, the Mississaugas were given 6000 acres of land on the Six Nations Reserve, establishing the Mississaugas of New Credit First Nation, now the Mississaugas of the Credit First Nation (**‘MCFN’**), in 1847 (Smith 2002).

Despite the encroachment of European settlers on previously established Aboriginal territories, **“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 Iroquoian systems of ideology and thought” (Ferris 2009: 114). As Ferris observes,** despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The current Study Area occupies part of Lot 175, Geographic Township of Thorold, Historical County of Welland, Niagara Region, Ontario.

In 1763, the Treaty of Paris brought an end to the Seven Years War, contested between the British, the French, and their respective allies. Under the Royal Proclamation of 1763, the large stretch of land from Labrador in the east, moving southeast through the Saint Lawrence River Valley to the Great Lakes and on to the confluence of the Ohio and Mississippi Rivers became the British Province of Québec (Niagara Historical Society and Museum 2008).

On July 24, 1788, Sir Guy Carleton, the Governor-General of British North America, divided the Province of Québec into the administrative districts of Hesse, Nassau, Mecklenburg, and Lunenburg (Archives of Ontario 2012-2015). Further change came in December 1791 when the province was rearranged into Upper Canada and Lower Canada under the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada; he initiated several initiatives to populate the province including the establishment of shoreline communities with effective transportation links between them (Coyne 1895).

On July 1792, Simcoe divided Upper Canada into 19 counties, including Niagara, stretching from Essex in the west to Glengarry in the east. Later that year, the four districts originally established **in 1788 were renamed the ‘Western’, ‘Home’, ‘Midland’ and ‘Eastern’ Districts. As population levels in Upper Canada increased, smaller and more manageable administrative bodies were**

needed resulting in the establishment of many new counties and townships (Archives of Ontario 2012-2015).

As population levels in Upper Canada increased, smaller and more manageable administrative bodies were needed resulting in the establishment of many new counties and townships. As part of this realignment, the boundaries of the Home and Western Districts were shifted and the London and Niagara Districts were established. Under this new territorial arrangement, the Study Area became part of Lincoln County within the Niagara District (Archives of Ontario 2009).

In 1845, after years of increasing settlement that began after the War of 1812, the southern portion of Lincoln County was severed to form Welland County (the two counties would be amalgamated once again in 1970 to form the Regional Municipality of Niagara). The county takes its name from the Welland River, which runs through the centre of the county and was itself named by Simcoe after a stream in Lincolnshire, England. This county was home to the Niagara Falls as well as many of the earliest settled townships in Upper Canada (Middleton and Langdon 1927).

Thorold Township is one of these early townships. It was settled by Butler's Rangers and originally called Township Number 9, but was officially formed in 1788 to provide land for United Empire Loyalist refugees and disbanded soldiers following the American Revolutionary War. It was named in honour of Sir John Thorold, Member of Parliament in the government of Upper Canada (Thompson 1898). The early settlements of the Township of Thorold included Beaverdams, St. Johns, and Decew Falls. These fell into decline after the opening of the first Welland Canal when the canal towns of Thorold, Port Robinson, and Allanburg began to prosper. (Jackson 1997).

The **Illustrated Historical Atlas of the Counties of Lincoln and Welland ('Historical Atlas')**, demonstrates the extent to which Thorold Township had been settled by 1876 (Page & Co. 1876; Figure 2). Landowners are listed for every lot within the township, many of which had been subdivided multiple times into smaller parcels to accommodate an increasing population throughout the late 19th century. Structures and orchards are prevalent throughout the township, almost all of which front early roads, especially the Niagara River and Lake Erie.

The Study Area is shown in the Historical Atlas to occupy lot 174 listed under the ownership of A. N. Page. The Page property is shown as the western section of a north-south split of lot 174, with a single structure depicted at the southern extent of the property, adjacent to the southern extent of the Study Area. Farming and homestead activity are the only activity visible within the direct vicinity of the Study Area. No other structures are depicted within the Study Area.

Although significant and detailed landowner information is available on the current Historical Atlas map of Thorold Township (Page & Co 1876: Figure 2), it should be recognized that historical county atlases were funded by subscriptions fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area measured 4 ha and was of a rectangular shape. At the time of the assessment, the Study Area comprised a residential house, pavement driveway, manicured lawn, agricultural field and culvert drain area. The study area itself is confined by road access frontage onto Rice Road to the west with neighbouring residential lots to the south and north, and agricultural lands to the east. The limits of the Study Area were surveyed and marked by the Proponent prior to the assessment.

The majority of the region surrounding the Study Area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the mid-19th century. Much of the region today continues to be used for agricultural purposes.

The Niagara Region as a whole is located within the Deciduous Forest Region of Canada and contains tree species which are typical of the more northern Great Lakes-St. Lawrence Biotic zone, such as beech, sugar maple, white elm, basswood, white oak and butternut (MacDonald & Cooper 1997:21). During pre-contact and early contact times, the land in the vicinity of the Study Area comprised a mixture of hardwood trees such as sugar maple, beech, oak and cherry. This pattern of forest cover is characteristic of areas of clay soil within the Maple-Hemlock Section of the Great Lakes-St. Lawrence Forest Province-Cool Temperate Division (McAndrews and Manville 1987). In the early 19th, Euro-Canadian settlers began to clear the forests for agricultural purposes.

The Study Area is situated within the Haldimand Clay Plain. According to Chapman and Putnam

...although it was all submerged in Lake Warren, the till is not all buried by stratified clay; it comes to the surface generally in low morainic ridges in the north. In fact, there is in that area a confused intermixture of stratified clay and till. The northern part has more relief than the southern part where the typically level lake plains occur.

Chapman and Putnam 1984:156

Haldimand clay is slowly permeable, imperfectly drained with medium to high water-holding capacities. Surface runoff is usually rapid, but water retention of the clayey soils can cause it to be droughty during dry periods (Kingston and Presant 1989). The soil is suitable for corn and soy beans in rotation with cereal grains as well as alfalfa and clover (Huffman and Dumanski 1986).

The closest source of potable water is a tributary of the Welland River, which runs directly through the Study Area.

1.3.2 Pre-Contact Aboriginal Land Use

This portion of southwestern Ontario has been demonstrated to have been occupied by people as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, people were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Thorold Township based on Ellis and Ferris (1990).

Table 1: Cultural Chronology for Thorold Township

Time Periods	Cultural Periods	Comments
9500 - 7000 BC	Paleo-Indian	first human occupation hunters of caribou and other extinct Pleistocene game nomadic, small band society
7500-1000 BC	Archaic	ceremonial burials increasing trade network hunter gatherers
1000 BC - 400 BC	Early Woodland	large and small camps spring congregation/fall dispersal

		introduction of pottery
400 BC - AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade networks
AD 800 - 1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300 - 1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large, palisaded villages
AD 1400 - 1650s	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3. Previously Identified Archaeological Work

To compile an inventory of archaeological resources, the registered archaeological site records kept by the MCM were consulted. In Ontario, information concerning archaeological sites stored in the ASDB (Government of Ontario n.d.) is maintained by the MCM. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13km east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area under review is situated 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 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or a licensed archaeologist with relevant cultural resource management interests.

An examination of the ASDB has shown that there are 47 archaeological sites registered within a 1km radius of the Study Area (Table 2). Of these sites, 40 are exclusively of aboriginal affinity, 4 sites are Euro-Canadian, and 3 sites are mixed Euro-Canadian and aboriginal affinity. The Aboriginal sites are primarily scatter and campsites with dating ranging from the Paleo-Indian to middle and late archaic through to woodland and post-contact. Of Euro-Canadian sites, all are dated post-contact and include residential/homestead and agricultural site types. Of the mixed affinity sites, only one is identified in the database as campsite and scatter.

Table 2: Registered Archaeological Sites within 1km of the Study Area

Borden Numbers	Site Names	Time Period	Affinity	Site Types
AgGt-51	Kunda Park, Extension 2	Pre-Contact	Aboriginal	scatter
AgGt-318		Pre-Contact	Aboriginal	scatter
AgGt-317		Archaic, Middle	Aboriginal	findspot
AgGt-316		Archaic, Late	Aboriginal	findspot
AgGt-315		Woodland, Early	Aboriginal	findspot
AgGt-313		Pre-Contact	Aboriginal	TBD
AgGt-312		Pre-Contact	Aboriginal	scatter
AgGt-311		Pre-Contact	Aboriginal	scatter
AgGt-310		Pre-Contact	Aboriginal	scatter
AgGt-309		Pre-Contact	Aboriginal	scatter
AgGt-308		Pre-Contact	Aboriginal	scatter
AgGt-307		Pre-Contact	Aboriginal	scatter
AgGt-306		Pre-Contact	Aboriginal	scatter
AgGt-305		Archaic, Late	Aboriginal	scatter
AgGt-304		Archaic, Late	Aboriginal	scatter
AgGt-303		Pre-Contact	Aboriginal	scatter

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AgGt-302		Archaic, Late	Aboriginal	scatter
AgGt-301		Archaic, Middle	Aboriginal	scatter
AgGt-300		Pre-Contact	Aboriginal	scatter
AgGt-299		Pre-Contact	Aboriginal	scatter
AgGt-298		Woodland, Early	Aboriginal	findspot
AgGt-297		Woodland, Late	Aboriginal	findspot
AgGt-296		Post-Contact	Aboriginal	Otherrefuse deposit
AgGt-290	Location 3	Pre-Contact	Aboriginal	camp / campsite
AgGt-289	Location 2	Post-Contact, Pre-Contact	Aboriginal	scatter
AgGt-288	Location 1	Archaic, Early, Archaic, Middle, Post-Contact, Pre-Contact, Woodland	Aboriginal	camp / campsite, dump
AgGt-269		Post-Contact	Euro-Canadian	residential
AgGt-263		Pre-Contact	Aboriginal	Unknown
AgGt-262		Paleo-Indian	Aboriginal	camp / campsite
AgGt-219	P1	Pre-Contact	Aboriginal	scatter
AgGt-217		Archaic, Middle	Aboriginal	camp / campsite
AgGt-216		Archaic, Late	Aboriginal	camp / campsite
AgGt-215		Pre-Contact	Aboriginal	camp / campsite
AgGt-214		Post-Contact	Euro-Canadian	agricultural
AgGt-203	not assigned/ P8	Paleo-Indian	Aboriginal	findspot
AgGt-201		Post-Contact, Pre-Contact	Euro-Canadian, Aboriginal	Scatter, campsite
AgGt-200		Pre-Contact	Aboriginal	
AgGt-171		Archaic, Middle, Pre-Contact	Aboriginal	camp / campsite, scatter
AgGt-170		Archaic, Late	Aboriginal	Unknown
AgGt-169		Pre-Contact	Aboriginal	scatter
AgGt-168		Post-Contact	Euro-Canadian	homestead
AgGt-167		Woodland	Aboriginal	Unknown
AgGt-166	AgGt166	Pre-Contact	Aboriginal	
AgGt-165	AgGt165	Pre-Contact	Aboriginal	scatter
AgGt-164	AgGt164	Post-Contact, Pre-Contact	Euro-Canadian, Aboriginal	
AgGt-163	AgGt163	Post-Contact	Euro-Canadian	
AgGt-162	AgGt-162	Post-Contact, Pre-Contact	Other Euro-Canadian, Aboriginal	

Detritus Consulting conducted a stage 1-2 assessment on the west side of Rice Road under PIF# P462-0151-2022. This report has yet to be submitted to the MCM. No archaeological sites have been registered within 50m of the Study Area.

1.3.4. Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Detritus applied archaeological potential criteria commonly used by the MCM to determine areas of archaeological potential within the Study Area. According to Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011) these variables include proximity to previously identified 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.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, when 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. 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 locations and types to varying degrees. As per Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011), water sources may be categorized in the following manner:

- Primary water sources, lakes, rivers, streams, 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, shorelines of drained lakes or marshes; and
- accessible or inaccessible shorelines, high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

As was discussed above, the closest source of potable water is a tributary of the Welland River, which runs directly through the Study Area.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The Study Area is situated within the Haldimand Clay Plain physiographic region. As was discussed earlier, the soils within this region are suitable for pre-contact and post-contact Aboriginal agriculture.

For Euro-Canadian sites, archaeological potential can 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.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as per Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario 2011). Current aerial imagery identified a number of potential disturbance areas within the Study Area including residential house and pavement driveway (see Section 1.3.1 above). It is recommended that these areas be subject to a Stage 2 property inspection, conducted according to Section 2.1.8, Section 1.2 of the *Standards and Guidelines* (Government of Ontario 2011), to confirm and document the degree and extent of the disturbance.

The *Historical Atlas* map of Thorold Township (Figure 2; Page & Co. 1876), demonstrates that Thorold Township was densely occupied by Euro-Canadian farmers by the late 19th century. Much of the established road system and agricultural settlement from that time is still visible today. Considering also the proximity of the Study Area to the early community of Welland, the Euro-Canadian archaeological potential of the Study Area is judged to be moderate to high.

2. Field Methods

The Stage 2 assessment of the Study Area was conducted on September 16th, 2022, under archaeological consulting license P017 issued to Mr. Garth Grimes by the MCM. The limits of the Study Area were surveyed and marked by the Proponent prior to the assessment.

At the time of primary assessment, the weather was overcast with a high of 15°; the soil was dry and screened easily. Assessment conditions were excellent and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1-26 demonstrate the land conditions at the time of the survey throughout the Study Area. Figure 3 illustrates the Stage 2 assessment methods, as well as photograph locations and directions all in relation to the proposed development of the Study Area.

Approximately 85% of the Study Area comprised agricultural fields, which were ploughed and allowed to weather as per Section 2.1.1, Standards 2 and 3 of the *Standards and Guidelines* (Government of Ontario 2011; Photos 1-12). The ploughing was deep enough to provide total topsoil exposure and provided a minimum of 80% surface visibility as per Section 2.1.1, Standards 4 and 5 of the *Standards and Guidelines* (Government of Ontario 2011). The ploughed area was subject to pedestrian survey at 5m intervals in accordance with Section 2.1.1, Standard 6 of the *Standards and Guidelines* (Government of Ontario 2011). No further archaeological methods were employed since no artifacts were identified during the test pit survey.

Approximately 6% of the Study Area comprised manicured lawn which was inaccessible for ploughing. These areas were subject to a typical test pit survey at 5m intervals following Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario 2011;). Test pits were excavated to within 1m of all standing structures, or until test pits demonstrated evidence of recent ground disturbance as per Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario 2011). **All test pits were at least 30 centimetres ('cm') in diameter and were excavated 5cm into sterile subsoil.** The soils were then examined for stratigraphy, cultural features, or evidence of fill. All soil from the test pits was screened through six-millimetre hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit. The test pit depth ranged from 16cm to 27cm and resulted in the identification of two stratigraphic layers of brown clay over a tan clay sublayer. No further archaeological methods were employed since no artifacts were identified during the test pit survey.

Approximately 3% of the Study Area comprised the possible disturbance areas identified on the current aerial imagery of the Study Area. Following a Stage 2 property inspection (see Section 1.3.4 above) residential house and pavement driveway were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario 2011). The disturbed areas were mapped, and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario 2011; Photos 13, 24, 25)

The remaining approximately 6% of the Study Area comprised a culvert drain area. This area was determined to retain no archaeological potential due to the identification of physical features of low archaeological potential, specifically a permanently wet area, as per Section 2.1, Standards 2.a.i of the *Standards and Guidelines* (Government of Ontario 2011a). The permanently wet area, as confirmed during a Stage 2 property inspection, were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario 2011a).

3. Record of Findings

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 2 below.

Table 3: Inventory of Document Record

Document Types	Current Location of Document Types	Additional Comments
1 Page of Field Notes	Detritus offices	Stored digitally in project files
1 Map provided by the Proponent	Detritus offices	Stored digitally in project files
1 Field Map	Detritus offices	Stored digitally in project files
27 Digital Photographs	Detritus offices	Stored digitally in project files

No archaeological resources were identified within the Study Area and so no material culture was collected. As a result, no storage arrangements were required.

4. Analysis and Conclusions

Detritus Consulting Ltd. ('Detritus') was retained by Mr. Matt Vartanian of Mountainview Homes ('the Proponent') to conduct a Stage 2 archaeological assessment on Part of Lot 174, Geographic Township of Thorold, Historical County of Welland, now the City of Welland, Region of Niagara, Ontario ('Study Area'; Figure 1). This assessment was undertaken in advance of a proposed residential development ('Development Map'; Figure 4).

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources; therefore, a Stage 2 assessment was recommended for the manicured lawn and agricultural field portions of the Study Area. The residential house and pavement driveway was determined to retain low or no archaeological potential based on the Stage 2 identification of extensive a deep land alteration that has severely damaged the integrity of archaeological resources. The previously disturbed areas, as confirmed during a Stage 2 property inspection, were mapped and photo documented only.

The subsequent Stage 2 assessment conducted on September 16th, 2022, involved a test pit survey at 5m intervals of the manicured lawn areas. This investigation resulted in the identification and documentation of no archaeological resources.

5. Recommendations

The Stage 2 assessment of the Study Area resulted in the identification of no archaeological resources; therefore, no additional archaeological assessment of the Study Area is recommended.

6. Advice on Compliance with Legislation

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c. O.18. The report is reviewed to ensure that it complies with the *Standards and Guidelines for Consultant Archaeologists* (2011a) 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 Ministry of Citizenship and Multiculturalism, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological 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*.

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*.

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 Government and Consumer Services.

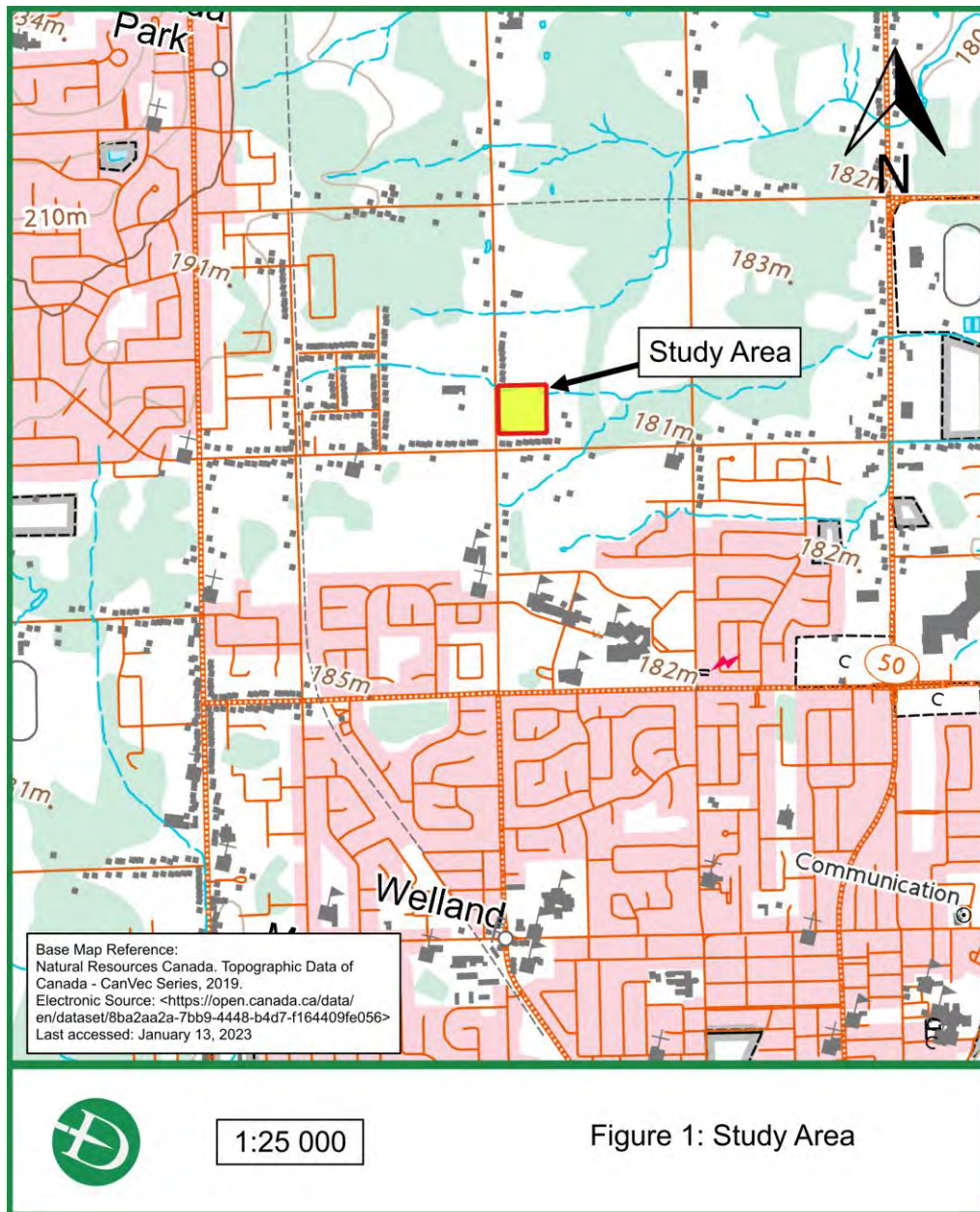
7. Bibliography and Sources

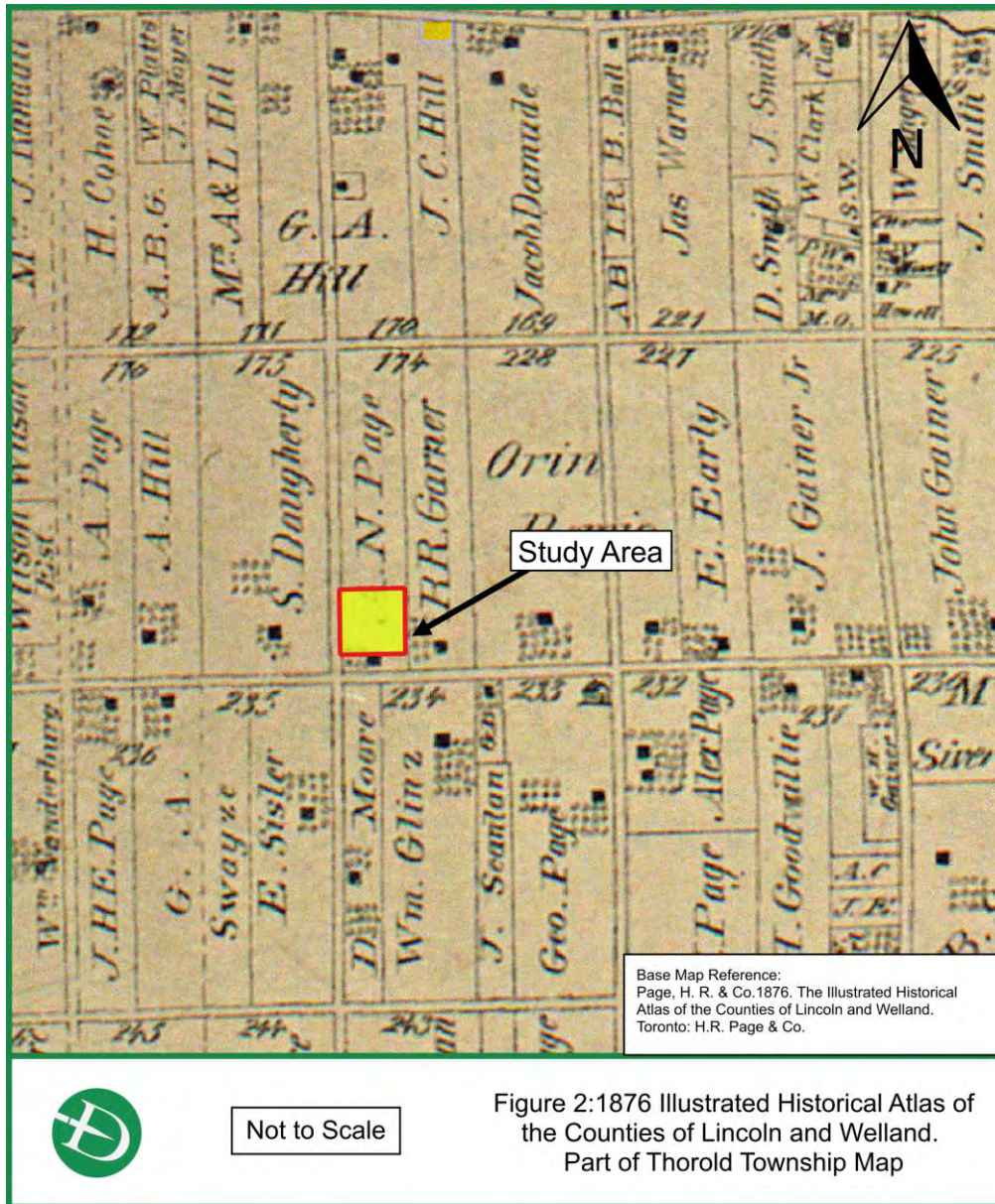
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8. Images

8.1 Maps





Stage 2 Archaeological Assessment, 450 Rice Road, Welland

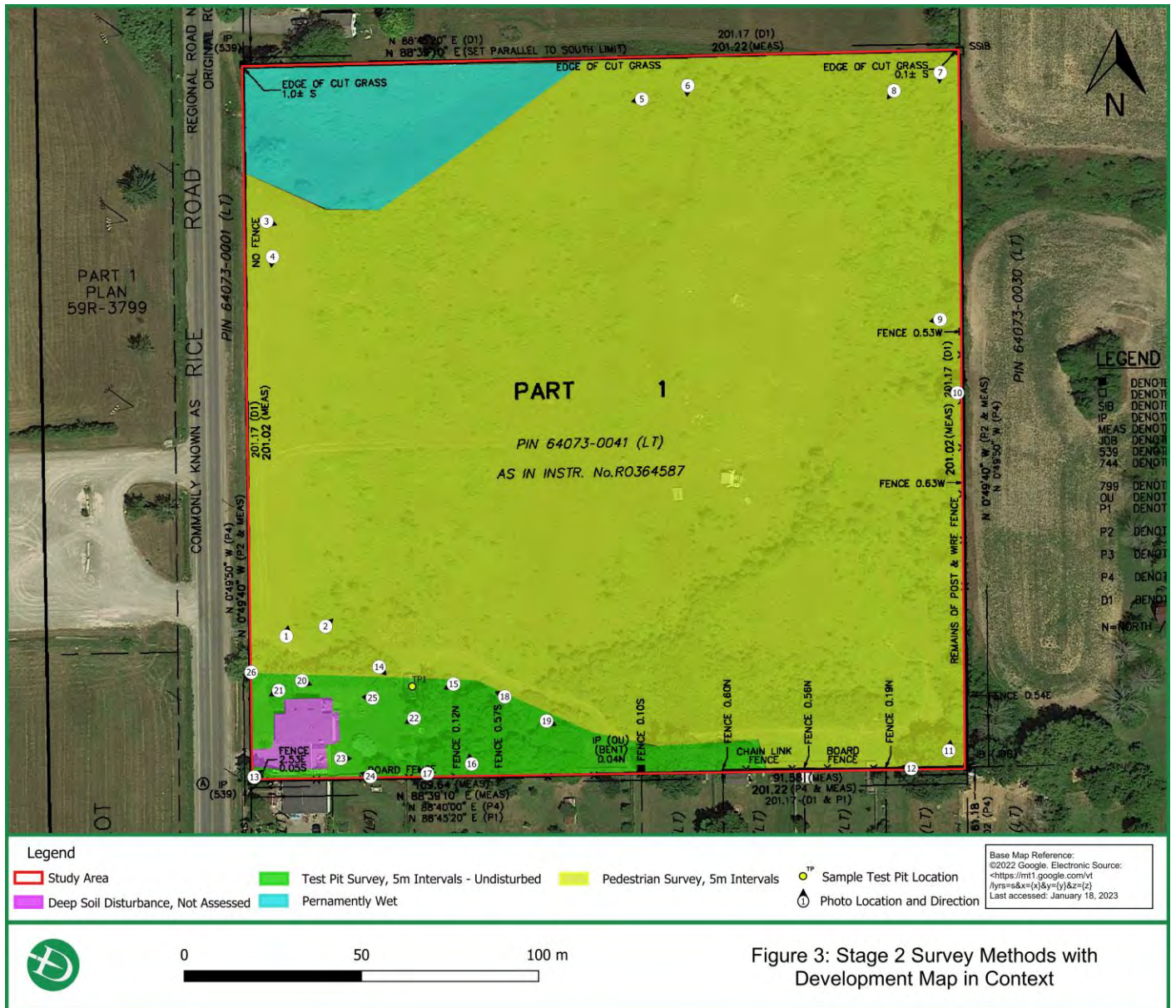
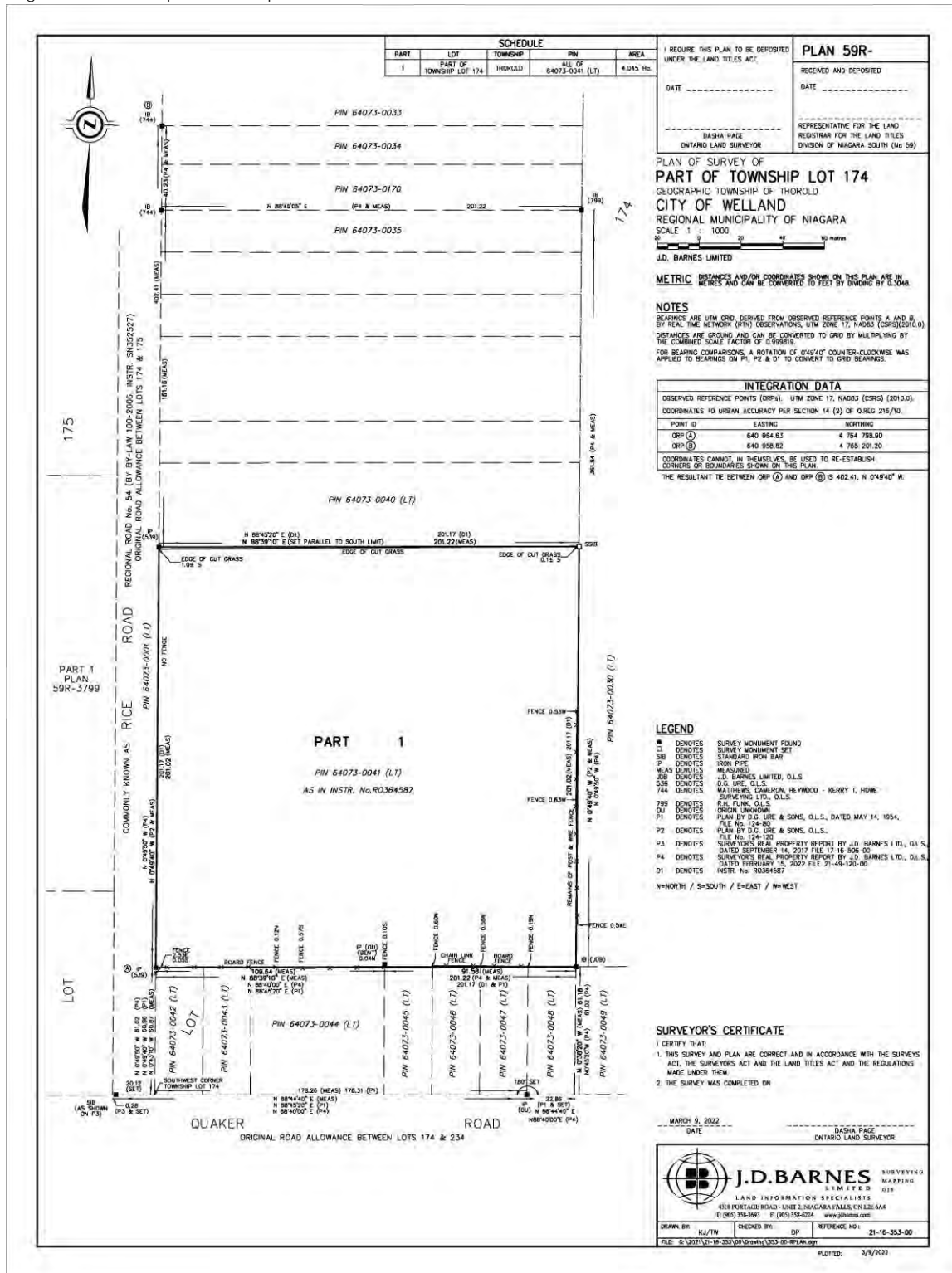


Figure 3: Stage 2 Survey Methods with Development Map in Context

Stage 2 Archaeological Assessment, 450 Rice Road, Welland

Figure 4: Development Map



8.2 Photos

Photo 1: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing north



Photo 2: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing north-east



Photo 3: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing east



Photo 4: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing south



Photo 5: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing west



Photo 6: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing south



Stage 2 Archaeological Assessment, 450 Rice Road, Welland

Photo 7: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing south



Photo 8: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing south-west



Photo 9: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing west



Photo 10: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing northwest



Photo 11: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing north



Photo 12: Agricultural Field, Pedestrian Surveyed at 5m Intervals, facing west



Stage 2 Archaeological Assessment, 450 Rice Road, Welland

Photo 13: Pavement Driveway Disturbance, facing northeast



Photo 14: Mixed Vegetation Test Pit Surveyed at 5m Intervals, facing southeast



Photo 15: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing southwest



Photo 16: Mixed Vegetation Test Pit Surveyed at 5m Intervals, facing north



Photo 17: Mixed Vegetation Test Pit Surveyed at 5m Intervals, facing northwest



Photo 18: Mixed Vegetation Test Pit Surveyed at 5m Intervals, facing northwest



Stage 2 Archaeological Assessment, 450 Rice Road, Welland

Photo 19: Mixed Vegetation Test Pit Surveyed at 5m Intervals, facing southeast



Photo 20: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing east



Photo 21: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing southwest



Photo 22: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing southwest



Photo 23: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing east



Photo 24: Single Family House Disturbance, facing west



Stage 2 Archaeological Assessment, 450 Rice Road, Welland

Photo 25: Single Family House Disturbance, facing west



Photo 26: Manicured Lawn Test Pit Surveyed at 5m Intervals, facing southwest



Photo 27: Sample Test Pit (TP1)

