

**Stage 1-2 Archaeological Assessment
ES Fox Block B, 0 Grassy Brook Road, Niagara Falls**

Part of Lot 1 Broken Front Concession, Geographic Township of Crowland,
Historical County of Welland, Regional Municipality of Niagara, Ontario

Submitted to:

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Submitted by:



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ORIGINAL REPORT

October 20, 2022

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Mr. Mark West of E. S. Fox Limited ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Part of Lot 1 Broken Front Concession, Geographic Township of Crowland, Historical County of Welland, Regional Municipality of Niagara, Ontario (Figure 1). This investigation was conducted in advance of a proposed commercial development at O Grassy Brook Road, Niagara Falls ('Study Area', Figure 3).

This investigation 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 conditions of this legislation, a Stage 1-2 assessment of the Study Area was conducted during the pre-approval phase of the proposed development under archaeological consulting license P462 issued to Mr. Michael Pitul by the Ministry of Heritage, Sport, Tourism and Culture Industries ('MHSTCI') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'; Government of Ontario, 2011)

The Study Area is a triangular-shaped parcel measuring 1.44 hectares ('ha') and consists entirely of manicured lawn with a few trees at the eastern edge. The Study Area is bound to the south and east by major roads, Grassy Brook and Montrose Road respectively, and along the northeast diagonal by a modern rail line.

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 field assessment was recommended for the manicured lawn. At the time of assessment there were no visible disturbances, which was confirmed during the subsequent Stage 2 assessment.

The Stage 2 assessment of the Study Area was conducted on August 25th, 2022 and consisted of a typical test pit survey of the manicured lawn at a five-metre interval. No archaeological resources were observed.

Given the results of the Stage 2 investigation and the identification and documentation of no archaeological resources, **no further archaeological assessment of the Study Area is recommended.**

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

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Project Personnel

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Acknowledgments

Generous contributions by Mark West of E. S. Fox Limited made this report possible.

1.0 Project Context

1.1 Development Context

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment on Part of Lot 1 Broken Front Concession, Geographic Township of Crowland, Historical County of Welland, Regional Municipality of Niagara, Ontario (Figure 1). This investigation was conducted in advance of a proposed commercial development at o Grassy Brook Road, Niagara Falls (Figure 3).

This investigation 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 conditions of this legislation, a Stage 1-2 assessment of the Study Area was conducted during the pre-approval phase of the proposed development under archaeological consulting license P462 issued to Mr. Michael Pitul by the Ministry of Heritage, Sport, Tourism and Culture Industries ('MHSTCI') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MHSTCI's 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 were 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; 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 Stage 2 assessment were 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.

The licensee received permission from the Proponent to enter the land and conduct all required archaeological fieldwork activities, including the recovery of artifacts.

1.2 Historical Context

1.2.1 Post-Contact Indigenous Resources

The earliest documented pre-European settlers arrived to the Niagara Peninsula from southwestern Ontario during the 14th century AD, at the peak of Iroquois culture. By 1400, the majority of the region was occupied by an Iroquoian-speaking tribe referred to as the Attawandaran (aka the Atiquandaronk or Attouanderonks), who exploited the fertile land and abundant water sources throughout the region for fishing, hunting and agriculture (Niagara Falls Info, 2022) This moniker was given to the community by the neighbouring Wendat as a slur against their unusual dialect. Those Attawandaran tribes who settled along the Niagara River were referred to as the Onguiaahra (later the Ongiara), which has been loosely translated as one of “the Straight,” “the Throat,” or “the Thunder of Waters” (Niagara-on-the-Lake Realty, 2022, Niagara-on-the-Lake, 2016) The name ‘Neutral’ was given to the Attawandaran by French explorers who began arriving in the 17th century. This new designation referred to the community’s status as peacekeepers between the warring Huron and Iroquois tribes (Niagara Falls Info, 2022)

The earliest recorded European visit to the Niagara region was undertaken by Étienne Brûlé, an interpreter and guide for Samuel de Champlain. In June 1610, Brûlé requested permission to live among the Algonquin people and to learn their language and customs. In return, Champlain agreed to take on a young Huron named Savignon and to teach him the language and customs of the French. The purpose of this endeavour was to establish good relations with Aboriginal communities in advance of future military and colonial enterprises in the area. In 1615, Brûlé joined twelve Huron warriors on a mission to cross enemy territory and seek out the Andaste people, allies of the Huron, to ask for their assistance in an expedition being planned by Champlain (Heindereich, 1990) It is believed that Brûlé first visited the future site of Niagara-on-the-Lake during this excursion (Niagara-on-the-Lake Realty, 2022). The mission was a success but took much longer than anticipated. Brûlé returned with the Andaste two days too late to help Champlain and the Hurons, who had already been defeated by the Iroquois (Heindereich, 1990).

Throughout the middle of the 17th century, the Iroquois of the Five Nations sought to expand upon their territory and to monopolise the local fur trade as well as trade between the European markets and the tribes of the western Great Lakes. A series of bloody conflicts, known as the Beaver Wars, or the French and Iroquois Wars, followed contested between the Iroquois and the French with their Huron and other Algonkian-speaking allies of the Great Lakes region. Many communities were destroyed during this protracted conflict including the Huron, Neutral, Erie, 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. By 1667, all members of the Five Nations had signed a peace treaty with the French and allowed their missionaries to visit their villages (Heindereich, 1990)

Ten years later, hostilities between the French and the Iroquois resumed after the latter formed an alliance with the British through an agreement known as the Covenant Chain (Heindereich, 1990). In 1696, an aging Louis de Buade, Comte de Frontenac et de Palluau, the Governor General of New France, rallied the Algonquin forces and drove the Iroquois out of the territories north of Lake Erie, as well as those to the west of present-day Cleveland, Ohio. A second treaty was concluded between the French and the Iroquois in 1701, after which the Iroquois remained mostly neutral (Jameison 1992, 80; Noble, 1978, 161)

Throughout the late 17th and early 18th centuries, various Iroquoian-speaking communities had been migrating into southern Ontario from New York State. In 1722, the Five Nations adopted the Tuscarora in New York becoming the Six Nations (Pendergast, 1995, p. 107). This period also marks the arrival of the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes (Konrad, 2003; Schmalz, 1991). The oral traditions of the Mississaugas, as told by Chief Robert Paudash 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 and, at the end of the 17th century, the Mississaugas settled permanently in Southern Ontario (Praxis Research Associates, n.d.). Around this same time, members of the Three Fires Confederacy (the Chippewa,

Ottawa, and Potawatomi) began immigrating from Ohio and Michigan into southwestern Ontario (Feest & Feest, 1978, pp. 778–9).

The Study Area first enters the Euro-Canadian historic record on May 9th, 1781 as part of the Niagara Treaty No. 381 with the Mississauga and Chippewa. This treaty involved the surrender of,

...all that certain tract of land situated on the west side of the said strait or river, leading from Lake Erie to Lake Ontario, beginning at a large white oak tree, forked six feet from the ground, on the bank of the said Lake Ontario, at the distance of four English miles measured in a straight line, from the West side of the bank of the said strait, opposite to the Fort Niagara and extending from thence by a southerly course to the Chipewigh River, at the distance of four miles on a direct line from where the said river falls into the said strait about the great Fall of Niagara or such a line as will pass at four miles west of the said Fall in its course to the said river and running from thence by a southeasterly course to the northern bank of Lake Erie at the distance of four miles on a straight line, westerly from the Post called Fort Erie, thence easterly along the said Lake by the said Post, and northerly up the west side of the said strait to the said lake Ontario, thence westerly to the place of beginning.

Morris, 1943, pp. 15–6

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, 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, 2022).

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, p. 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 Study Area is located within Geographic Township of Crowland, Historical County of Welland, Regional Municipality of Niagara, Ontario (Figure 2).

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 former Province of Québec was rearranged into Upper Canada and Lower Canada under the provisions of the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada; he spearheaded several initiatives to populate the province including

the establishment of shoreline communities with effective transportation links between them (Coyne, 1895).

In July 1792, Simcoe divided Upper Canada into 19 counties stretching from Essex in the west to Glengarry in the east. Each new county was named after a county in England or Scotland; the constituent townships were then given the names of the corresponding townships from each original British county (Powell & Coffman, 1956).

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. 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 the Niagara District, comprising Lincoln County, Haldimand County and other lands (Archives of Ontario, 2012-2015). 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, of which Crowland Township was a part.

The Township of Crowland was an interior township within the county, separated from the Townships of Thorold and Stamford by the Welland River. More specifically, the Welland River makes up the entire northern and western borders of the Study Area and the Welland Canal passes through the southwest portion north to south. Given the fact that Crowland Township did not border on the Niagara River or either of its lakes, settlement in the area was slow. When the first settlers began arriving in 1788, most of the township remained an unbroken forest. The first major road in the area was surveyed in 1801 by Charles Fell; this road began at Zavitt's mills in Bertie Township and passed through Crowland Township before ending at the Welland River. In 1803, the township was officially recognised and public officials were elected. According to the census records from that year, the population of Crowland Township was 216, including 120 males and 96 females. By 1817, the population had increased to approximately 600 residents. The addition of a gristmill and sawmill saw land prices increase from 18 pence to 20 shillings per acre. By the next year, land within Crowland County was valued at four pounds per cleared acre or thirty shillings per uncleared acre (Page, 1876).

The two largest communities in the township were the hamlet of Cook's Mill and the village of Welland. In 1799, the Yokom family arrived from Pennsylvania and built a gristmill on Lyon's Creek. Just prior to the War of 1812, English settler Calvin Cook purchased the mill and added a tannery, sawmill and distillery. The resulting community that developed here was called Cook's Mill (it is also often referred to simply as Crowland). Towards the end of the War of 1812, 1200 American soldiers were dispatched to take Cook's Mill and destroy the British flour and grain supply. Following a skirmish here on October 19, 1814, the Americans destroyed all the flour and grain in the mill, burned a number of the houses in the vicinity, then retreated back to Black Creek, in Buffalo (Page, 1876).

The *Illustrated Historical Atlas of the Counties of Lincoln and Welland* ('*Illustrated Atlas*'), demonstrates the extent to which Crowland Township had been settled by 1876 (Page, 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 an especially the Niagara River and Lake Erie.

According to the *Illustrated Historical Atlas of the Counties of Lincoln and Welland* (Page, 1876; '*Illustrated Atlas*'), the Study Area is located at the very eastern edge of the township in part of Lot 1 in the Broken Front Concession that is bound by the Welland River at its northern edge. The Lot is one of several lot portions owned by J. O. Dell, a farmer who settled there in 1834. Several orchards and structures are depicted on the *Illustrated Atlas*, included a hotel to the north of the Study Area located in the northeast corner of the Lot along the Welland River fronting on what is now Montrose Road. The Study Area itself is located within the southeastern corner bounded by Montrose Road and Grassy Brook Road, which are visible but unnamed on the *Illustrated Atlas*. A very small structure and associated fence and trees are depicted within the Study Area but are not present or visible today (Page, 1876). The modern railway is not shown on the *Illustrated Atlas*, but

it was built through Crowland Township as a part of the Canada Southern Railway in 1883 to connect Welland to Niagara (Niagara Falls Info, 2022)

It should be recognised, however, that although significant and detailed landowner information is available on the current *Illustrated Atlas*, 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). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore & Head, 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area is a triangular-shaped parcel measuring 1.44ha that consists entirely of manicured lawn with a few trees at the eastern edge. The Study Area is bound to the south and east by major roads, Grassy Brook and Montrose Road respectively, and along the northeast diagonal by a modern rail line.

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 Study Area is located within Haldimand Clay Plain physiographic region (Chapman & Putnam, 1984). During pre-contact and early contact times, this area comprised a mixture of deciduous trees and open areas. In the early 19th century, Euro-Canadian settlers began to clear the forests for agricultural purposes, which have been ongoing in the vicinity of the four sites for over 100 years.

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 & Presant, 1989). 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 & Putnam, 1984, p. 156

Huffman and Dumanski add that the soil within the region is suitable for corn and soy beans in rotation with cereal grains as well as alfalfa and clover (Huffman & Dumanski, 1986).

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). 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 & Manville, 1987). In the early 19th, Euro-Canadian settlers began to clear the forests for agricultural purposes.

The closest source of potable water is a small tributary of the Welland River 95 metres ('m') to the east of the Study Area known as Grassy Brook. The Welland River itself lies 243m to the north of the Study Area.

1.3.2 Pre-contact Indigenous Land Use

This portion of southwestern Ontario was 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 Crowland Township, based on (Ellis & Ferris, 1990)

Table 1: Cultural Chronology for Crowland Township

Time Period	Cultural Period	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
1000–400 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 network
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 1400–1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Previous Identified Archaeological Work

In order to compile an inventory of known archaeological resources in the vicinity of the Study Area, Detritus consulted the ASDB. The ASDB, which is maintained by the MHSTCI (Government of Ontario, n.d.), 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 13 kilometres (‘km’) 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 lies within block AgGs.

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 MHSTCI 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.

According to the ASDB, thirty-three archaeological sites have been registered within a 1km radius of the Study Area (Table 2). There are twelve pre-contact Aboriginal sites, of which two can be dated to the Early Woodland period and three to the late Archaic Period, and one post-contact Aboriginal Site. There are three post-contact Euro-Canadian sites and two are multi-component sites. The remaining fifteen sites had no time period or cultural affinity recorded in the ADSB.

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

Borden Number	Site Name	Time Period	Affinity	Site Type
AgGs-236	Cabeiroi Camp 2	Pre-Contact	Aboriginal	Othercamp/campsite, scatter
AgGs-238	Welland Drain	Pre-Contact	Aboriginal	Othercamp/campsite
AgGs-436		Pre-Contact	Aboriginal	camp / campsite
AgGs-437		Pre-Contact	Aboriginal	camp / campsite
AgGs-438		Pre-Contact	Aboriginal	camp / campsite
AgGs-439		Pre-Contact	Aboriginal	camp / campsite
AgGs-440		Pre-Contact	Aboriginal	camp / campsite
AgGs-34	MIA 8484	Woodland, Early	Aboriginal	findspot
AgGs-51	Thompsons Creek	Paleo-Indian, Late, Woodland, Early	Aboriginal	hunting
AgGs-19	MIA 8473	Archaic, Late	Aboriginal	Other camp/campsite
AgGs-20	MIA 8474	Archaic, Late	Aboriginal	Other camp/campsite
AgGs-27	MIA 8481	Archaic, Late	Aboriginal	Other camp/campsite
AgGs-450		Post-Contact		scatter
AgGs-50	Feren	Post-Contact, Pre-Contact	OtherAboriginal, Euro-Canadian	
AgGs-435		Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	Unknown, camp / campsite
AgGs-33	MIA 8483	Post-Contact	Euro-Canadian	house
AgGs-237		Post-Contact	Euro-Canadian	Unknown
AgGs-375		Post-Contact	Euro-Canadian	farmstead
AgGs-93	TCPL 90-13	Other		Other findspot_
AgGs-95	TCPL 91-3	Other		Other findspot_
AgGs-4	Feren			
AgGs-15	MIA 8469			
AgGs-16	MIA 8470			
AgGs-17	MIA 8471			
AgGs-18	MIA 8472			
AgGs-21	MIA 8475			
AgGs-28	MIA 8482			
AgGs-35	MIA 8485			
AgGs-48	14-001:3			
AgGs-234				
AgGs-379				
AgGs-380				
AgGs-381				

To the best of Detritus' knowledge, no assessments have been conducted and no sites are 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 MHSTCI (Government of Ontario, 2011) to determine areas of archaeological potential within the Study Area. 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 sites locations and types to varying degrees. The MHSTCI (Government of Ontario, 2011) categorizes water sources 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 stated above, the closest source of potable water is a small tributary of the Welland River 95m to the east of the Study Area known as Grassy Brook. The Welland River itself lies 243m to the north of 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 Indigenous agriculture. Furthermore, given the twelve pre-contact and one post-contact Aboriginal sites as well as the two multi-component sites located within 1km of the Study Area, the potential for pre-contact Indigenous, post-contact Indigenous material culture within the Study Area is deemed to be moderate to high.

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.

The *Illustrated Atlas* demonstrates the extent to which Crowland Township had been settled by 1876 (Page, 1876; Figure 2). Landowners are listed for a large majority of the lots within the township, many of which had been subdivided multiple times into smaller parcels to accommodate an increasing population throughout the late 19th century. Much of the established road system and agricultural systems throughout the township is still visible today. Structures and orchards are prevalent throughout the township, almost all of which front early roads. Given these findings, along with the presence of three Euro-Canadian and two multi-component sites within 1km, the Euro-Canadian archaeological potential of the Study Area is judged to be moderate to high.

2.0 Field Methods

The Stage 2 archaeological assessment was conducted on August 25th, 2022, under archaeological consulting license P462 issued to Mr. Michael Pitul by the MHSTCI. The limits of Study Area were bound to the south and east by major roads, Grassy Brook and Montrose Road respectively, and along the northeast diagonal by a modern rail line.

The weather during the assessment was sunny and 29°C; 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 to 7 demonstrate the land conditions at the time of the survey throughout the Study Area, including areas that met the requirements for a Stage 2 field assessment, as per Section 7.8.6, Standards 1a, 1b, and 1c of the *Standards and Guidelines* (Government of Ontario, 2011). Figure 3 and 4 provides an illustration of the Stage 2 assessment methods, as well as all photograph locations and directions.

The entire Study Area (100%) consisted of manicured lawn. The area was deemed inaccessible to ploughing and was subject to a typical Stage 2 test pit survey at five-metre intervals in accordance with Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). The test pit survey was conducted to within 1m of the built structures or until test pits showed evidence of recent ground disturbance, as per Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011). Each test pit was at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil. The soils were then examined for stratigraphy, cultural features, or evidence of fill. A single soil layer was observed comprising sandy soil with clay subsoil. 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 pits ranged in depth from 19 to 26cm (Photos 8 and 9). All test pits contained a single stratigraphic layer that was sandy loam with a clay subsoil. Considering that each test pit was excavated 5cm into sterile subsoil, this observed soil layer ranged in depth from 14cm to 21cm. All soil was screened through six-millimetre mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit as per Section 2.1.2, Standards 7 and 9 of the *Standards and Guidelines* (Government of Ontario 2011). No artifacts were encountered during the test pit survey; therefore, no further survey methods were employed.

3.0 Record of Finds

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 3 below.

Table 3: Inventory of Document Record

Document Type	Current Location of Document Type	Additional Comments
1 Page of Field Notes	Detritus office	Stored digitally in project file
1 Map provided by the Proponent	Detritus office	Stored digitally in project file
1 Field Map	Detritus office	Stored digitally in project file
9 Digital Photographs	Detritus office	Stored digitally in project file

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

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment on Part of Lot 1 Broken Front Concession, Geographic Township of Crowland, Historical County of Welland, Regional Municipality of Niagara, Ontario (Figure 1). This investigation was conducted in advance of a proposed commercial development at 0 Grassy Brook Road, Niagara Falls (Figure 3).

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 field assessment was recommended for the manicured lawn. At the time of assessment there were no visible disturbances, which was confirmed during the subsequent Stage 2 assessment.

The Stage 2 assessment of the Study Area was conducted on August 25th, 2022 and consisted of a typical test pit survey of the manicured lawn at a five-metre interval. No archaeological resources were observed.

5.0 Recommendations

Given the results of the Stage 2 investigation and the identification and documentation of no archaeological resources, **no further archaeological assessment of the Study Area is recommended.**

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological 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 Heritage, Sport, Tourism and Culture Industries, 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 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

7.0 Bibliography and Sources

- Archives of Ontario. (2012-2015). *The Evolution of the District and County System, 1788-1899*. Retrieved January 2021, from <http://www.archives.gov.on.ca/en/maps/ontario-districts.aspx>
- Caston, W. A. (1997). Evolution in the Mapping of Southern Ontario and Wellington County. *Wellington County History, 10*, 91-106.
- Chapman, L. J., & Putnam, D. F. (1984). *The Physiography of Southern Ontario. Ontario Geological Survey. Special Volume 2* (3rd Edition ed.). Ontario Ministry of Natural Resources.
- Coyne, J. H. (1895). *The Country of Neutrals (As Far as Comprised in the County of Elfin): From Champlain to Talbot*. St. Thomas: The St. Thomas Print.
- Ellis, C. J., & Ferris, N. (Eds.). (1990). *The Archaeology of Southern Ontario to A.D. 1650*. (Vol. 5). Occasional Publication of the London Chapter, Ontario Archaeology Society Inc.
- Feest, C. F., & Feest, J. E. (1978). The Ottawa. In B. G. Trigger (Ed.), *Handbook of North American Indians. Vol. 15 Northeast* (pp. 772-786). Smithsonian Institute.
- Ferris, N. (2009). *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. University of Arizona.
- Gentilcore, L. R., & Head, G. (1984). *Ontario's History in Maps*. Toronto: University of Toronto Press.
- Government of Ontario. (1990a). Retrieved 01 24, 2022, from Ontario Planning Act, R.S.O. 1990, CHAPTER P. 13. Last Amendment: 2021, c. 25, Sched. 24: <https://www.ontario.ca/laws/statute/90p13>
- Government of Ontario. (1990b). Retrieved 01 24, 2022, from Ontario Heritage Act, R.S.O. 1990, CHAPTER O.18. Last amendment: 2021, c. 4, Sched. 6, s. 74: <https://www.ontario.ca/laws/statute/90o18>
- Government of Ontario. (1990c). Retrieved 01 24, 2022, from Freedom of Information and Protection of Privacy Act, R.S.O. 1990, CHAPTER F.31. Last amendment: 2021, c. 4, Sched. 11, s. 11: <https://www.ontario.ca/laws/statute/90f31>.
- Government of Ontario. (2011). *Standards and Guidelines for Consultant Archaeologists*. Toronto: MHSTCI.
- Government of Ontario. (n.d.). *Archaeological Sites Database Files*. MHSTCI.
- Heindereich, C. (1990). History of the St. Lawrence–Great lakes Area to 1650. In C. J. Ellis, & N. Ferris (Ed.), *The Archaeology of Southern Ontario, Occasional papers of the London Chapter. 5*, pp. 475–92. OAS.
- Huffman, E., & Dumanski, J. (1986). *Agricultural Land Use Systems in the Regional Municipality of Niagara*. Ottawa: Land Resource Research Institute.
- Jameison, S. M. (1992). Regional Interaction and Ontario Iroquois Evolution. *Canadian Journal of Archaeology, 16*, 70–88.
- Kingston, M. S., & Presant, E. W. (1989). *The Soils of the Regional Municipality of Niagara*. Report no. 60, Ontario Ministry of Agriculture, Ontario Institute of Pedology.
- Konrad, V. (2003). An Iroquois Frontier: the North Shore of Lake Ontario During the Late Seventeenth Century. *Journal of Historical Geography, 7*(2), 129-144.
- MacDonald, R., & Cooper, M. S. (1997). Environmental Context. In R. F. Williamson, & R. I. MacDonald (Ed.), *The Shadow of the Bridge—The Archaeology of the Peace Bridge Site (AfGr-9), 1994–1996 Investigations. Occasional Publications. 1*. Toronto: Archaeological Services, Inc.

- McAndrews, J. H., & Manville, G. C. (1987). Descriptions of Ecological Regions. In R. C. Harris (Ed.), *Historical Atlas of Canada from the Beginning to 1800*. Toronto: University of Toronto Press.
- Morris, J. L. (1943). *Indians of Ontario (1964 reprint)*. Department of Lands and Forests, Government of Ontario.
- Niagara Falls Info. (2022). *Native American Settlement in Niagara*. Retrieved August 2022, from <https://www.niagarafallsinfo.com/niagara-falls-history/niagara-falls-municipal-history/the-chronicles-of-settlement-in-niagara/native-american-settlement-in-niagara/>
- Niagara Historical Society and Museum. (2008). *Our Glory: A brief History of Niagara-on-the-Lake*. Niagara-on-the-lake: Niagara Historical Society and Museum.
- Niagara-on-the-Lake. (2016). *Queen-Picton Streets Heritage Conservation District Expansion Study (Second Draft)*.
- Niagara-on-the-Lake Realty. (2022). *History of Niagara On the Lake*. Retrieved August 2022, from <https://notlrealty.com/history-of-niagara-on-the-lake/>
- Noble, W. (1978). The Neutral Indians. In Essays in Northeastern Anthropology in Memory of Marian E. White, Occasional Publications. In W. Englebrecht, & G. Donald (Ed.), *Northeastern Anthropology* 5 (pp. 152-64). Rindge, NH: Department of Anthropology, Franklin Pierce College.
- Page, H. R. (1876). *The Illustrated Historical Atlas of the Counties of Lincoln and Welland*. Toronto: H. R. Page & co.
- Page, H. R. (1879). *The Illustrated Historical Atlas of the County of Haldimand, Ontario*. Toronto: H. R. Page & Co.
- Pendergast, J. (1995). The Identity of Jacques Cartier's Stadaconans and Hochelagans: The Huron-Iroquois Option. In A. Bekerman, & G. Warrick (Ed.), *Origins of the People of the Longhouse: Proceedings of the 21st Annual Symposium of the Ontario Archaeological Society* (pp. 106-118). Ontario Archaeological Society.
- Powell, J. R., & Coffman, F. (1956). *Lincoln County, 1856-1956*. St. Catharines: Lincoln County Council.
- Praxis Research Associates. (n.d.). *The History of the Mississaugas of the New Credit First Nation*. Lands, Research, and Membership: Mississaugas of the New Credit First Nation.
- Schmalz, P. S. (1991). *The Ojibwa of Southern Ontario*. Toronto: University of Toronto Press.
- Smith, D. (2022). Their Century and a Half on the Credit: The Mississaugas. In F. Dieterman (Ed.), *Mississauga: The First 10,000 Years* (pp. 107-122). Easted Books.
- Tanner, H. (Ed.). (1987). *Atlas of Great Lakes Indian History*. University of Oklahoma Press.
- Weaver, S. (1978). Six Nations of the Grand River, Ontario. *Handbook of North American Indians. Vol. 15 Northeast* (pp. 525-536). Smithsonian Institute Press.

8.0 Maps

Figure 1: Study Area Location

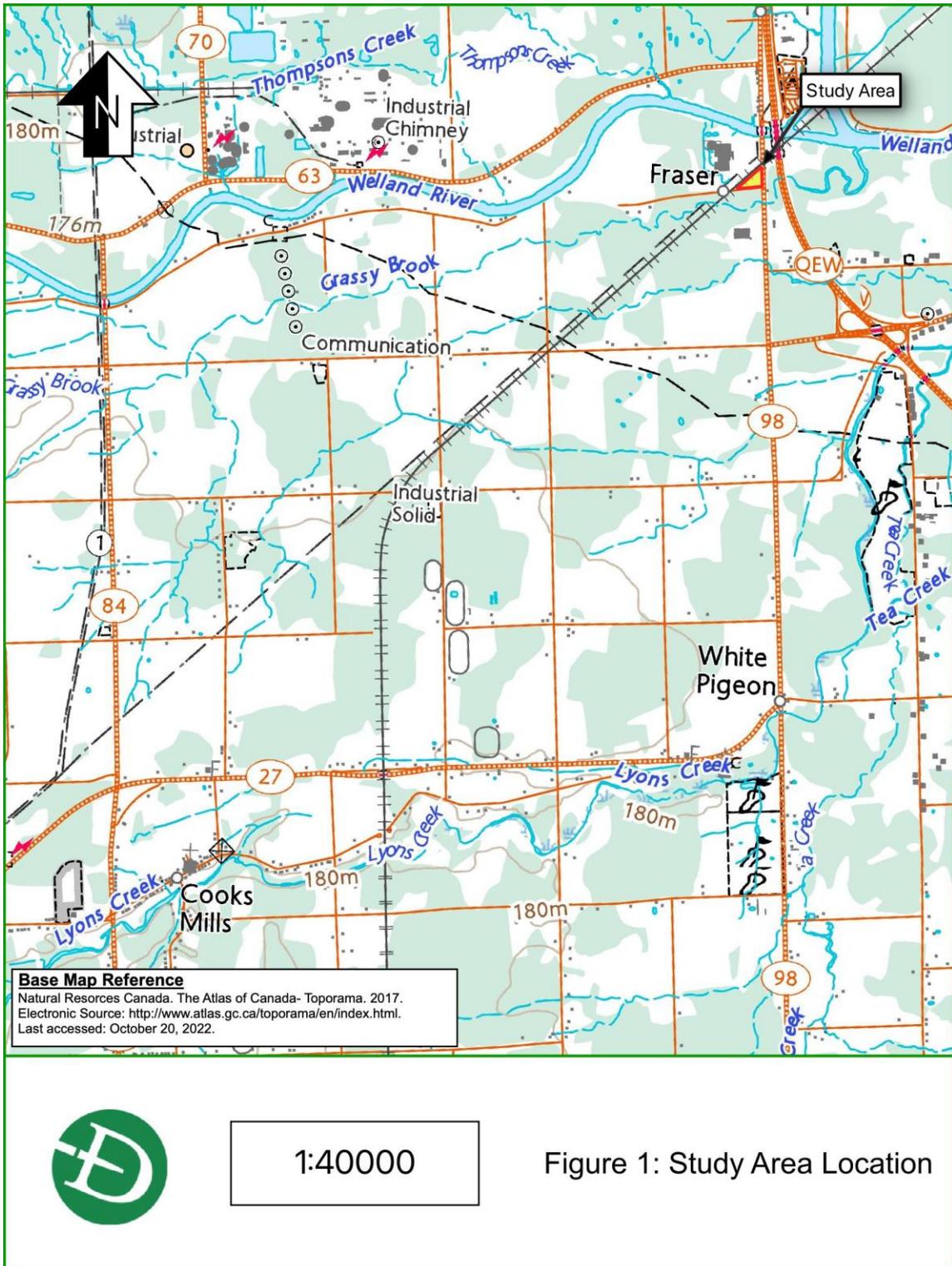


Figure 2: Historic Map Showing Study Area Location



Base Map Reference
Page, H. R. & Co. 1876. *The Illustrated Historical Atlas of the Counties of Lincoln and Welland*.
Toronto: H.R. Page & Co



Not to Scale

Figure 2: Portion of H. R. Page & Co. 1876 Historical Atlas of Lincoln and Welland Counties

Figure 3: Stage 2 Field Methods Map



Figure 4: Stage 2 Field Methods in Relation to the Development Plan



Figure 5: Development Plan



9.0 Images

9.1 Photos

Photo 1: Manicured lawn, Test Pit Surveyed, from southeast corner looking northeast toward Montrose Road



Photo 2: Manicured lawn, Test Pit Surveyed, from southeast corner looking west



Photo 3: Manicured lawn, Test Pit Surveyed, from southeast corner looking west



Photo 4: Manicured lawn, Test Pit Surveyed, from southwest corner looking east



Photo 5: Manicured lawn, Test Pit Surveyed, from southwest corner looking northeast

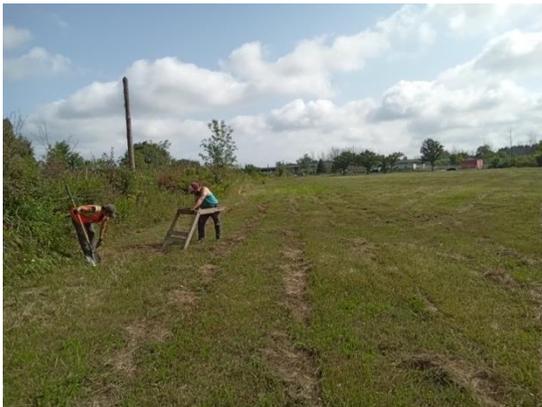


Photo 6: Manicured lawn, Test Pit Surveyed, from eastern edge looking east



**Photo 7: Manicured lawn, Test Pit
Surveyed, from northeast corner looking
south**



Photo 12: Sample test pit photo



Photo 13: Sample test pit photo

