

**Stage 1 Archaeological Assessment  
Proposed Peace Bridge Village Phase 4  
Vacant Parcel South of Louisa Street  
and Northwest of Jordyn Drive, and East  
of Alfred Street, Town of Fort Erie**

Plan 2371 Lot 3 to Lot 5, NP992  
Geographic Township of Bertie,  
Historical County of Welland,  
Now the Town of Fort Erie,  
Regional Municipality of Niagara, Ontario

**Submitted to:**

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and

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**Submitted by:**



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**ORIGINAL REPORT**

May 25, 2022

## Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Upper Canada Planning & Engineering Ltd. ('the Proponent') to conduct a Stage 1 archaeological assessment on Plan 2371 Lot 3 to Lot 5, NP992, within the Geographic Township of Bertie, historical County of Welland, now the Town of Fort Erie within the Regional Municipality of Niagara, Ontario (Figure 1). This assessment was undertaken in advance of the proposed Phase 4 of the Peace Bridge Village subdivision development on an existing woodlot property located south of Louisa Street, northwest of Jordyn Drive and east of Alfred Street, within the Town of Fort Erie (the 'Study Area'; Figure 6).

An archaeological 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* (Government of Ontario 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 this condition, a Stage 1 assessment of the Study Area was conducted during the application phase of the proposed development under archaeological consulting license P017 issued to Garth Grimes 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 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'; Government of Ontario 2011).

The Study Area is a rectangular parcel with an angled eastern edge, which corresponds with the residential properties from 360-404 Jordyn Drive. A narrow strip of land separates the Study Area from these residential properties and appears to be the future road allowance for Phillips Street visible to the southwest of the Study Area. The Study Area measures 2.66 hectares and is comprised entirely of a dense woodlot. The property is bound to the north by two stretches of Louisa Street, a woodlot, and residential properties along Burwell Street; to the west by a vacant parcel; to the south by a woodlot; and to the east by the future road allowance for Phillips Street.

The Stage 1 assessment of the Study Area consisted of background research only; no property inspection was conducted as a greater level of detail was not needed to recommend assessment strategies, as per Section 1.2 of the *Standards and Guidelines* (Government of Ontario 2011). As part of the background research the *Town of Fort Erie Official Plan* (Town of Fort Erie 2018) was consulted, which indicates that the Study Area is located within an area of archaeological potential; and adjacent to a War of 1812 Zone of Sensitivity.

The Stage 1 background research indicated that the entire Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. As a result, the woodlot was determined to retain archaeological potential. As such, a **Stage 2 archaeological assessment is recommended for the entire Study Area.**

The woodlot, which is inaccessible for ploughing, will be subject to a typical Stage 2 test pit assessment at a five-metre interval, conducted according to Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario 2011). The test pit survey will be conducted until test pits show evidence of disturbance according to Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario 2011). Each test pit must be at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil. The soil and test pits will then be examined for stratigraphy, cultural features, or evidence of fill. All soil will be screened through six-millimetre ('mm') mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit.

In accordance with Section 2.1.3 Standard 1 of the *Standards and Guidelines* (Government of Ontario 2011), if archaeological resources are encountered during the Stage 2 test pit survey, the test pit excavation will continue on the survey grid to determine the extent of further positive test pits. If insufficient archaeological resources are found through a continued survey of the grid to meet the criteria for continuing to Stage 3, the survey coverage will be intensified around the positive test pits using either Option A or Option B of Section 2.1.3, Standard 2 of the *Standards*

*and Guidelines* (Government of Ontario 2011). UTM coordinates will then be recorded for all positive test pit in addition to a fixed reference landmark using a Garmin eTrex 10 GPS unit with a minimum accuracy 1-2.5m (North American Datum 1983 ('NAD83') and Universal Transverse Mercator ('UTM') Zone 17T). All artifacts will be collected and recorded according to their associated positive test pit or 1m test unit.

Furthermore, an area of possible disturbance was visible on the 1965 aerial imagery of the Study Area. This area includes a laneway extending through the western end of the Study Area, which runs northwest by southeast (Figure 3). A combination of property inspection and test pitting will be used to determine which parts of the Study Area may in fact be disturbed, as per Section 2.1.8 of the *Standards and Guidelines* (Government of Ontario 2011). Areas evaluated as having no or low potential based on the Stage 2 identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources will be excluded from the Stage 2 survey, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario 2011). These areas of disturbance will be mapped and photo documented only in accordance with Section 2.1 Standard 2b and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario 2011).

Additionally, if wet or steeply sloped areas are observed during the Stage 2 assessment these areas will be excluded from the Stage 2 survey, as per Section 2.1 of the *Standards and Guidelines* (Government of Ontario 2011). The slope and permanently wet areas will be mapped and photo documented only in accordance with Section 2.1 Standard 6 and Section 7.8.1 of the *Standards and Guidelines* (Government of Ontario 2011).

*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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## Acknowledgments

Generous contributions by Mr. William Heikoop of Upper Canada Planning & Engineering Ltd. made this report possible.

## 1.0 Project Context

### 1.1 Development Context

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An archaeological 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* (Government of Ontario 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 this condition, a Stage 1 assessment of the Study Area was conducted during the application phase of the proposed development under archaeological consulting license P017 issued to Garth Grimes 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 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'; Government of Ontario 2011).

The purpose of the Stage 1 Background Study was 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 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.

No property inspection was conducted as a greater level of detail was not needed to recommend assessment strategies, as per Section 1.2 of the *Standards and Guidelines* (Government of Ontario 2011).

#### 1.2.1 Post-Contact Aboriginal Resources

The earliest documented pre-European settlers arrived to the Niagara Peninsula from southwestern Ontario during the 14<sup>th</sup> 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 2019). 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 2016; Niagara-on-the-Lake Realty 2019). The Town of Niagara-on-the-Lake derives its name from the Onguiaahra village site on which it was founded. 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 Iroquios tribes (Niagara Falls Info 2019).

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 (Heidenreich 1990). It is believed that Brûlé first visited the future site of Niagara-on-the-Lake during this excursion (Niagara-on-the-Lake 2016). 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 (Heidenreich 1990).

Throughout the middle of the 17<sup>th</sup> 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 followed known as the Beaver Wars, or the French and Iroquois Wars, were contested between the Iroquois and the French with their Huron and other Algonquian 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 (Heidenreich 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 (Heidenreich 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 (Jamieson 1992:80; Noble 1978:161).

Throughout the late 17<sup>th</sup> and early 18<sup>th</sup> 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: 107). This period also marks the arrival of the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes (Konrad 1981; 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 17<sup>th</sup> 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 and Feest 1978: 778-779).

The Study Area first enters the Euro-Canadian historic record on May 9<sup>th</sup> 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 straight, 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: 15-16

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 is located within the Geographic Township of Bertie in the historical County of Welland, now the Town of Fort Erie within the Regional Municipality of Niagara, Ontario.

Following the Treaty of Paris of 1763, which ended the Seven Years War, Canada was transferred from France to Britain, becoming the Province of Québec. 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 of Québec 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 1895:33).

In July 1792, Simcoe divided Upper Canada into 19 counties, including Lincoln County, stretching from Essex in the west to Glengarry in the east. Later that year, the four districts originally established in 1788 were renamed as 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 Lincoln County in the Niagara District. 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) (Archives of Ontario 2012-2015).



Settlement within Bertie Township began in 1764, immediately following the end of the Seven Years War. To help defend his newly acquired territory, King George III built a series of military forts, including Fort Erie along the Niagara River. During the American Revolutionary War (1775-1783), the fort was used as a supply depot for British troops. Following the conflict, the land around the fort, later designated as the Town of Fort Erie, was granted to members of the disbanded Butler's Rangers. In 1784, this territory became known as the Township of Bertie. Included in the list of Loyalist settlements within the township was the village of Ridgeway, which was named after the limestone ridge that passes through it from north to south. Settlers continued to arrive throughout the remainder of the 18<sup>th</sup> and early 19<sup>th</sup> centuries, attracted by the fertile soil throughout the township, which was suitable for growing barley, wheat, oats amongst other crops (Niagara Parks 2022).

Following the winter of 1803, a new stone fort was constructed inland from the site of the original Fort Erie, which was made of wood and susceptible to ice damage. This new fort remained incomplete at the start of the War of 1812. American troops captured the new Fort Erie on two occasions during the War of 1812. In 1814, following a long, protracted siege by British forces, the Americans destroyed the fort before retreating back to Buffalo (Niagara Parks 2022).

In the middle of the 19<sup>th</sup> century, the Township of Bertie, and in particular Bertie Hall, became a major stopping point for the underground railroad (Calarco *et al* 2011:220). Later, on June 2, 1866, between 1,000 and 1,350 Irish-American invaders, known as the Fenians, crossed the Niagara River and defeated the local militia at the Battle of Ridgeway. The next day, as they were withdrawing back to America, the Fenian raiders met with another small force of Canadian volunteers and defeated them at the Battle of Fort Erie. Eventually, the Fenians retired back across the river and surrendered to American authorities. This conflict was the largest engagement of the Fenian raids and the only armed victory for the Irish during their battle for Irish Independence between 1798 and 1919 (Niagara Parks 2022).

Much of the development of Bertie Township can be attributed to the advancement of the railroad. In the 1850s, the small farming community of Ridgeway received an arm of the Buffalo, Brantford and Goderich Railway, the earliest railway to be built in southwestern Ontario. Later, in 1873, the Grand Trunk Railway built the International Railway Bridge, resulting in large population increases throughout the township and the establishment of a new town just north of the original settlement of Fort Erie. This town was originally called Victoria, but would later be renamed Bridgeburg. By 1876, Victoria had three railway stations (Scrimgeour 1990). The population of Fort Erie, meanwhile had reached approximately 1,200 and the village of Ridgeway, 800. A decade later, in 1887, the population of Fort Erie had climbed to around 4,000 while Victoria boasted nearly 700 residents. Ridgeway, meanwhile, had experienced a slight decrease in its growth, with a population of around 600. The following year witnessed the opening of a new amusement park at Crystal Beach. The park remained active for just over a century before closing its doors in 1989. In 1970, Bertie Township amalgamated with Fort Erie and Crystal Beach to form the Town of Fort Erie (Niagara Parks 2022).

The *Illustrated Historical Atlas of the Counties of Lincoln and Welland* ('*Historical Atlas*'), demonstrates the extent to which Bertie 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 19<sup>th</sup> century. Structures and orchards are prevalent throughout the township, almost all of which front early roads and waterways, especially the Niagara River and Lake Erie.

The historic community of Fort Erie is visible on the Niagara River, along eastern edge of the township. Although no landowner information is provided for the town lots within Fort Erie, the street layout and lot divisions depicted on the *Historical Atlas* map are still recognisable today. The lot occupied by Study Area is visible within the Town of Fort Erie, between two stretches of the Grand Trunk Railway running north-south and southwest-northeast. The early community of Victoria is visible to the northeast of the Study Area.

Although significant and detailed landowner information is available on the current *Historical Atlas* map of Bertie Township, it should be recognized that historical county atlases were funded by subscription 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 is a rectangular parcel with an angled eastern edge, which corresponds with the residential properties from 360-404 Jordyn Drive. A narrow strip of land separates the Study Area from these residential properties and appears to be the future road allowance for Phillips Street visible to the southwest of the Study Area. The Study Area measures 2.66 hectares ('ha') and is comprised entirely of a dense woodlot. The property is bound to the north by two stretches of Louisa Street, a woodlot, and residential properties along Burwell Street; to the west by a vacant parcel; to the south by a woodlot; and to the east by the future road allowance for Phillips Street.

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-19<sup>th</sup> 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 19<sup>th</sup>, Euro-Canadian settlers began to clear the forests for agricultural purposes.

The Study Area is situated within the Haldimand Clay Plain physiographic region. 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 primary soil type identified within the Study Area itself has been classified as Welland Clay, a dark greyish to reddish brown clay and clay loam over a compact, mottled reddish brown gritty clay with few stone inclusions (Ontario Agricultural College *et al* 1935).

The Study Area is situated approximately 835 metres ('m') to the west of the Niagara River, near the point where it drains into Lake Erie. The Niagara River is a 58 kilometres ('km') waterway that connects Lake Erie and Lake Ontario and serves as a natural border separating Canada from the United States. The Niagara River is part of the Great Lakes Basin, which was formed 18,000 years ago during the last Ice Age as the ice sheets moved southward, carving out the individual basins for the Great Lakes. As the ice sheets retreated, they released vast quantities of melt water into these basins. In the Niagara Peninsula, the melt water flowed through Lake Erie, the Niagara River and Lake Ontario down to the St. Lawrence River and the Atlantic Ocean (Niagara Peninsula Conservation Authority 2017).

On the Canadian side, the Niagara River Watershed consists of the bed of the Niagara River itself from Fort Erie to Niagara-on-the-Lake as well as all of the Welland River and several smaller

tributaries in the upper and lower Niagara River (Niagara Peninsula Conservation Authority 2017). On the American side, the Niagara River Watershed encompasses 365,504ha within the western portion of New York State. Here, Lake Erie and the two principal rivers of the watershed, the Buffalo and Niagara, receive waters from over 19 smaller tributaries. Overall, the American portion of the watershed includes 5,130km of watercourses, as well as several small lakes and ponds within the Counties of Erie, Niagara, Genesee, Orleans and Wyoming (Buffalo Niagara Riverkeeper 2016).

### 1.3.2 Pre-Contact Aboriginal Land Use

The Study Area is situated in a portion of Southwestern Ontario that has 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 Bertie Township (Ellis and Ferris 1990).

**Table 1: Cultural Chronology for Bertie 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 Previously Identified Archaeological Work

In order to compile an inventory of archaeological resources, the registered archaeological site records kept by the MHSTCI were consulted. In Ontario, information concerning archaeological sites stored in the ASDB (Government of Ontario n.d.) is maintained by the MHSTCI. 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 within Borden Block AfGr.

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, 22 archaeological sites have been registered within a 1km radius of the Study Area (Table 2). Over half these, 12 in all, have been classified as multi-component sites. An

additional eight sites are pre-contact Aboriginal sites spanning the Archaic and Woodland periods. The remaining two sites are Euro-Canadian.

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

Borden Number	Site Name	Time Period	Affinity	Site Type
AfGr-3	Fort Erie III	Archaic, Late, Post-Contact	Aboriginal, English, Euro-Canadian	camp / campsite, fort, military
AfGr-4	Fort Erie Quarry	Archaic, Late, Woodland, Early	Aboriginal	quarry
AfGr-6	Snake Hill	Archaic, Post-Contact	Aboriginal, American	camp/campsite, cemetery
AfGr-10	-	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	tool manufacture, house
AfGr-13	AfGr-13	Post-Contact	Euro-Canadian	house
AfGr-14	-	Post-Contact	Aboriginal, Euro-Canadian	scatter
AfGr-15	-	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	-
AfGr-51	-	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	-
AfGr-52	-	Pre-Contact	Aboriginal	-
AfGr-53	-	Pre-Contact	Aboriginal	scatter
AfGr-54	-	Pre-Contact	Aboriginal	findspot
AfGr-61	Nelson Site	Post-Contact, Woodland	Aboriginal, English, Euro-Canadian	administrative, battlesite, camp / campsite, fort, habitation, military, residential, scatter, settlement
AfGr-68	Dominion 1	Archaic, Late, Post-Contact, Pre-Contact, Woodland, Late	Aboriginal	camp / campsite, fort
AfGr-69	Dominion 2	Post-Contact	Euro-Canadian	Unknown
AfGr-77	-	Pre-Contact	Aboriginal	scatter
AfGr-80	Valleywood Site	Woodland	Aboriginal	camp / campsite
AfGr-81	Military Reserve Lot 8	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	camp / campsite, house, log
AfGr-86	-	Woodland	Aboriginal	findspot
AfGr-96	AfGr-96 (P1)	Post-Contact, Woodland	Aboriginal, Euro-Canadian	Unknown
AfGr-97	Site AfGr-97 (P2)	Post-Contact, Woodland, Late	Aboriginal, Euro-Canadian	scatter
AfGr-98	AfGr-98 (P3)	Post-Contact, Woodland	Aboriginal, Euro-Canadian	scatter
AfGr-100	-	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	scatter

To the best of Detritus' knowledge, no other assessments have been conducted adjacent to the Study Area, and no sites are registered within 50m of the Study Area.

## 2.0 Field Methods

The Stage 1 assessment compiled all available information concerning any known and/or potential archaeological heritage resources within the Study Area. This investigation was conducted under archaeological consulting licence P017 issued to Garth Grimes the MHSTCI.

The Study Area measures 2.66ha and is comprised entirely of a dense woodlot. An optional property inspection was not conducted as part of this assessment, since a greater level of detail was not needed to recommend assessment strategies as per Section 1.2 of the *Standards and Guidelines* (Government of Ontario 2011).

### 3.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1 archaeological assessment in advance of the proposed Phase 4 of the Peace Bridge Village subdivision development on an existing woodlot property located south of Louisa Street, northwest of Jordyn Drive and east of Alfred Street, within the Town of Fort Erie.

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 to determine areas of archaeological potential within 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 Study Area is located within the Niagara River Watershed, which consists of the Niagara River from Fort Erie to Niagara-on-the-Lake as well as all of the Welland River and several smaller tributaries in the upper and lower Niagara River. The sources of potable water throughout this region are plentiful. The Study Area is situated approximately 835m to the west of the Niagara River, near the point where it drains into Lake Erie.

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 primary soils within the Study Area, meanwhile, have been documented as being suitable for pre-contact Aboriginal practices. Add to this discussion the presence of eight pre-contact Aboriginal site and twelve multi-component sites within 1km of the Study Area and the Aboriginal archaeological potential is judged 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.

As part of the background research the *Town of Fort Erie Official Plan* (Town of Fort Erie 2018) was consulted, which indicates that the Study Area is located within an area of archaeological potential; and adjacent to a War of 1812 Zone of Sensitivity.

The *Historical Atlas* map of Bertie Township (Page & Co 1876; Figure 2), demonstrates that Bertie Township was densely occupied by Euro-Canadian farmers by the late 19<sup>th</sup> century. Much of the established road system and agricultural settlement from that time is still visible today. The historic community of Fort Erie is visible on the Niagara River, along eastern edge of the township. Although no landowner information is provided for the town lots within Fort Erie, the street layout and lot divisions depicted on the *Historical Atlas* map are still recognisable today.



The lot occupied by Study Area is visible within the Town of Fort Erie, between two stretches of the Grand Trunk Railway running north-south and southwest-northeast. The early community of Victoria is visible to the northeast of the Study Area. Given the two sites containing post-contact Euro-Canadian artifacts and the twelve containing both pre-contact and Euro-Canadian cultural material are located within 1km of the Study Area, the Euro-Canadian archaeological potential is also judged to be moderate to high.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area (Government of Ontario 2011). An area of possible disturbance was visible on the 1965 aerial imagery of the Study Area (Figure 3). This area includes a laneway extending through the western end of the Study Area, which runs northwest by southeast.

Typically, archaeological potential can be determined not to be present for areas that have been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources, as per Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario 2011). Included among the activities listed that may result in deep disturbance is infrastructure development. However, given that no property inspection was conducted as part of the Stage 1 assessment, the area of possible disturbance within the Study Area can not be confirmed. Therefore, Detritus determined that the entire Study Area demonstrated the potential for the recovery of pre-contact Aboriginal, post-contact Aboriginal, and Euro-Canadian archaeological resources, and were recommended for additional assessment.



## 4.0 Recommendations

The Stage 1 background research indicated that the entire Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. As a result, the woodlot was determined to retain archaeological potential. As such, a **Stage 2 archaeological assessment is recommended for the entire Study Area.**

The woodlot, which is inaccessible for ploughing, will be subject to a typical Stage 2 test pit assessment at a five-metre interval, conducted according to Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario 2011). The test pit survey will be conducted until test pits show evidence of disturbance according to Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario 2011). Each test pit must be at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil. The soil and test pits will then be examined for stratigraphy, cultural features, or evidence of fill. All soil will be screened through six-millimetre ('mm') mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit.

In accordance with Section 2.1.3 Standard 1 of the *Standards and Guidelines* (Government of Ontario 2011), if archaeological resources are encountered during the Stage 2 test pit survey, the test pit excavation will continue on the survey grid to determine the extent of further positive test pits. If insufficient archaeological resources are found through a continued survey of the grid to meet the criteria for continuing to Stage 3, the survey coverage will be intensified around the positive test pits using either Option A or Option B of Section 2.1.3, Standard 2 of the *Standards and Guidelines* (Government of Ontario 2011). UTM coordinates will then be recorded for all positive test pit in addition to a fixed reference landmark using a Garmin eTrex 10 GPS unit with a minimum accuracy 1-2.5m (North American Datum 1983 ('NAD83') and Universal Transverse Mercator ('UTM') Zone 17T). All artifacts will be collected and recorded according to their associated positive test pit or 1m test unit.

Furthermore, an area of possible disturbance was visible on the 1965 aerial imagery of the Study Area (Figure 3). This area includes a laneway extending through the western end of the Study Area, which runs northwest by southeast. A combination of property inspection and test pitting will be used to determine which parts of the Study Area may in fact be disturbed, as per Section 2.1.8 of the *Standards and Guidelines* (Government of Ontario 2011). Areas evaluated as having no or low potential based on the Stage 2 identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources will be excluded from the Stage 2 survey, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario 2011). These areas of disturbance will be mapped and photo documented only in accordance with Section 2.1 Standard 2b and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario 2011).

Additionally, if wet or steeply sloped areas are observed during the Stage 2 assessment these areas will be excluded from the Stage 2 survey, as per Section 2.1 of the *Standards and Guidelines* (Government of Ontario 2011). The slope and permanently wet areas will be mapped and photo documented only in accordance with Section 2.1 Standard 6 and Section 7.8.1 of the *Standards and Guidelines* (Government of Ontario 2011).

## 5.0 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.

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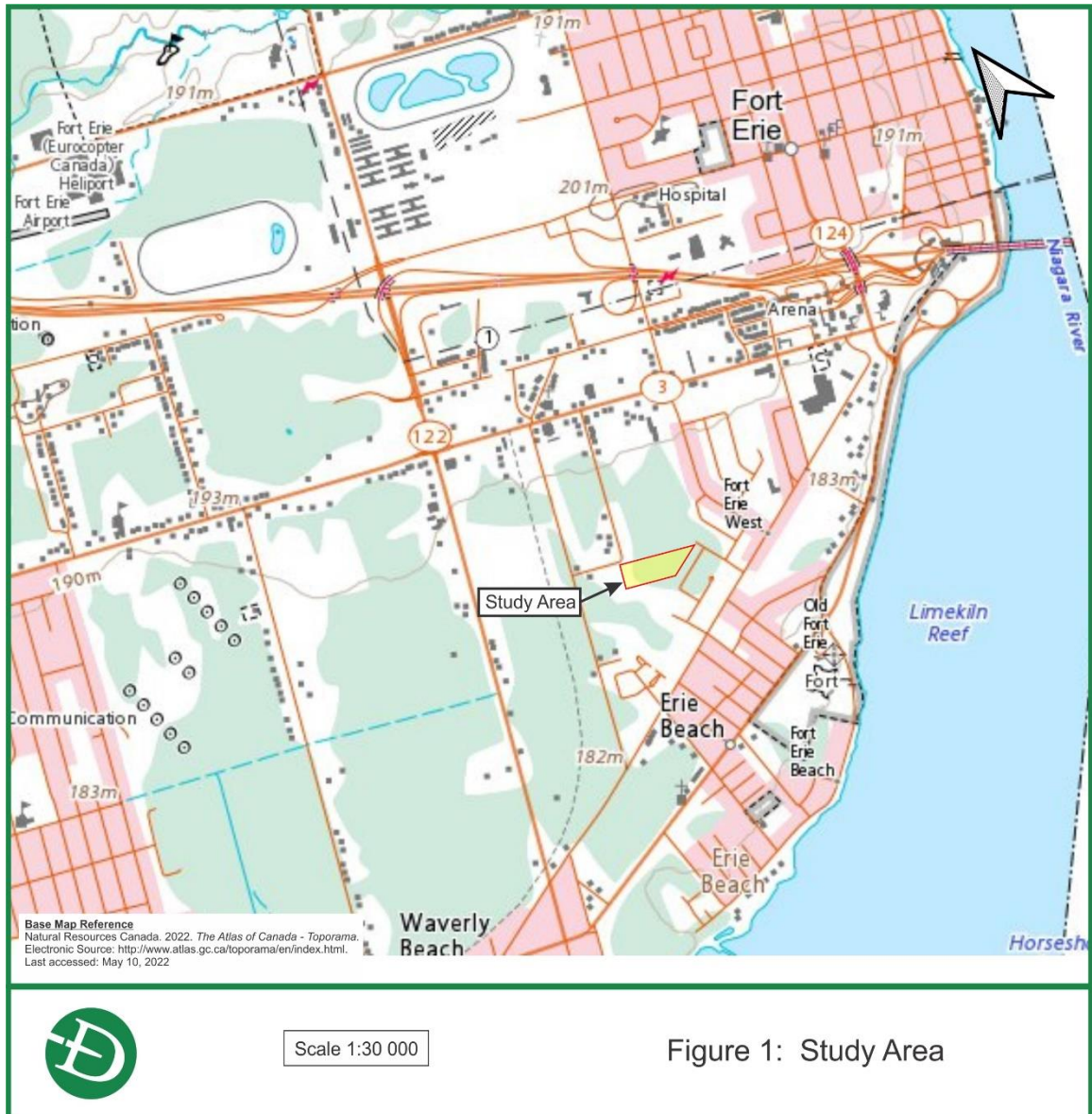
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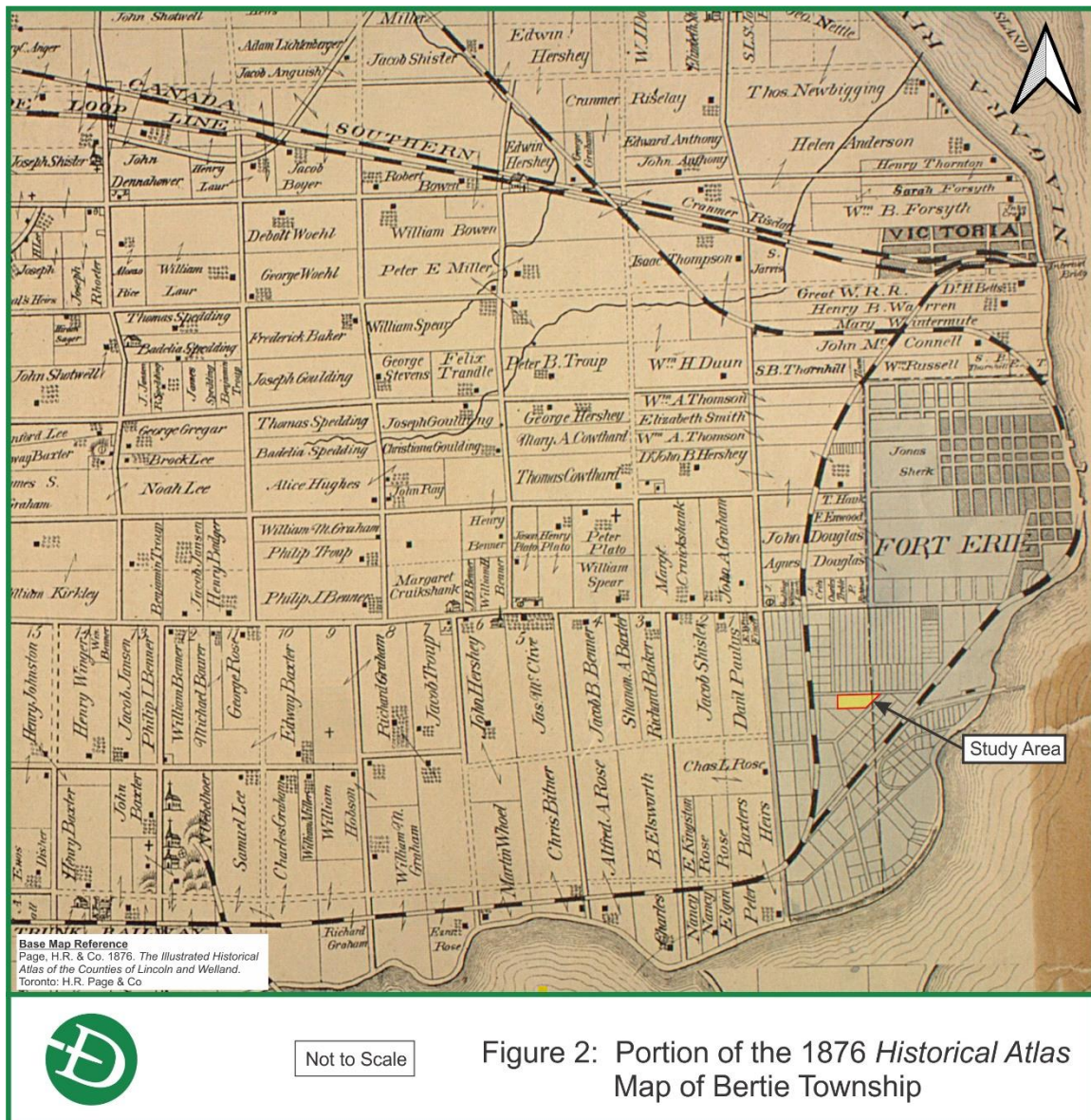
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## 7.0 Maps



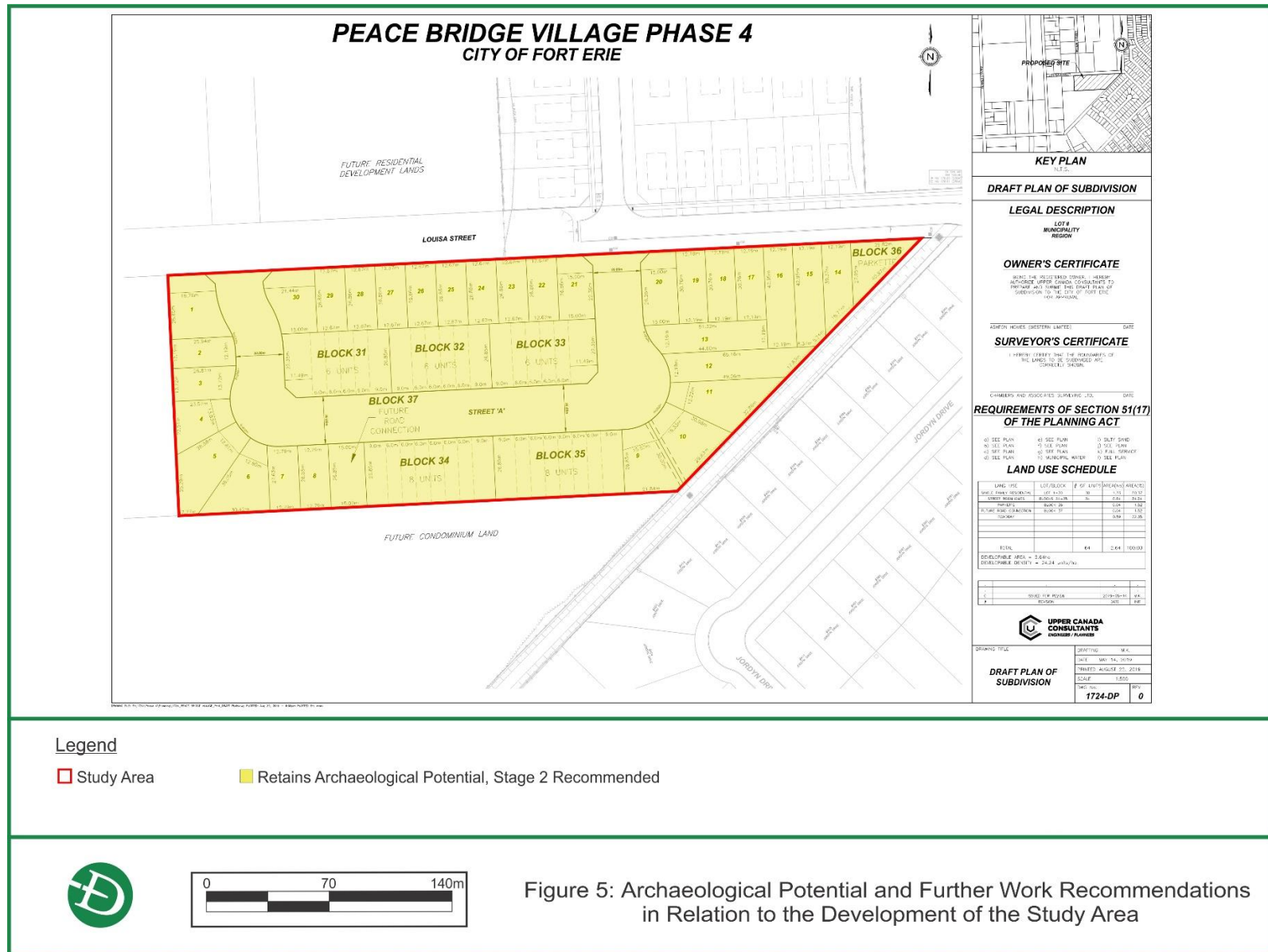








## Stage 1 Archaeological Assessment, Proposed Peace Bridge Village Phase 4





## Stage 1 Archaeological Assessment, Proposed Peace Bridge Village Phase 4

Figure 6: Development Map

