Stage 1 Archaeological Assessment of the Port Colborne Lands Parcel 1, Part of Lots 22, 23, and 24, Concession 2, Geographic Township of Humberstone, County of Welland, City of Port Colborne, Regional Municipality of Niagara

Original Report

Prepared for:

Elite MD Developments

102 - 3410 South Service Road

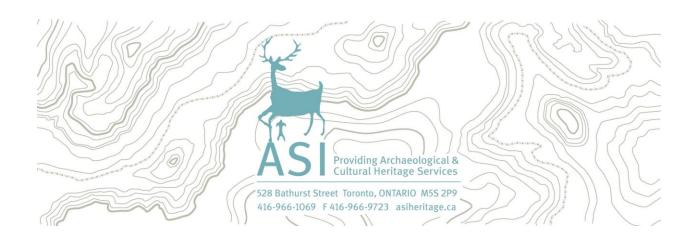
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Archaeological Licence: P449 (Bhardwaj)

Project Information Form P449-0524-2021

Archaeological Services Inc. File: 21PL-215

28 February 2022



Executive Summary

Archaeological Services Inc. was contracted by Elite MD Developments to undertake a Stage 1 Archaeological Assessment of the Port Colborne Lands Parcel 1, part of Lots 22, 23, and 24, Concession 2, in the Geographic Township of Humberstone, County of Welland, now in the City of Port Colborne, Regional Municipality of Niagara. The project area is approximately 74.7 hectares. Permission to access the project area and to carry out all activities necessary for the completion of the assessment was granted by the proponent on August 11, 2021.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the project area, along with nineteenth- and twentieth-century settlement trends. This research has led to the conclusion that there is potential for the presence of both Indigenous and Euro-Canadian archaeological resources within the project area.

The Stage 1 assessment has determined that the entire project area retains archaeological potential and will require a Stage 2 Archaeological Assessment in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' 2011 Standards and Guidelines for Consultant Archaeologists.



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1.0 Project Context

Archaeological Services Inc. was contracted by Elite MD Developments to undertake a Stage 1 Archaeological Assessment of the Port Colborne Lands Parcel 1, part of Lots 22, 23, and 24, Concession 2, in the Geographic Township of Humberstone, County of Welland, now in the City of Port Colborne, Regional Municipality of Niagara (Figure 1). The project area is approximately 74.7 hectares.

1.1 Development Context

This assessment was conducted under the senior project management of Jennifer Ley (R376), the project management of Jamie Houston-Dickson (P398), and the project direction of Robb Bhardwaj (P449); the work was completed under Ministry of Heritage, Sport, Tourism and Culture Industries (hereafter the Ministry) Project Information Form P449-0542-2021. All activities carried out during this assessment were completed as part of a Secondary Plan submission, as required by the City of Port Colborne and the *Planning Act* (Ministry of Municipal Affairs and Housing, 1990). All work was completed in accordance with the *Ontario Heritage Act* (Ministry of Culture [now the Ministry], 1990) and the *Standards and Guidelines for Consultant Archaeologists* (hereafter the Standards) (Ministry of Tourism and Culture [now the Ministry], 2011).

The overall Port Colborne Lands development area encompasses a large assembly of lands comprised of multiple property parcels (a mix of former residential and commercial lands and actively cultivated and fallow agricultural fields) situated between Highway 3 to the north, Elizabeth Street to the west, Lorraine Road to the east, and Killaly Street East to the south (part of Lots 21 through 24, Concession 2), with an additional property located south of Killaly Street East (part of Lot 22, Concession 1) (Figure 2); not all properties within this general area are included in the Port Colborne Lands development area. The various properties within the overall Port Colborne Lands development area have been grouped into three distinct project areas ("Parcels"), each of which will be subject to separate archaeological assessments.



Parcel 1, the focus of the current assessment, is the largest of the three project areas (74.7 hectares) and comprises the majority of the west and central portions of the overall development. The Parcel 1 project area consists of a 62.1-hectare block of land on the west side of Snider Road within Lots 23 and 24, Concession 2, and an additional 12.6-hectare block of land on the east side of Snider Road in the southwest portion Lot 22, Concession 2 (Figures 2 and 3). Permission to access the Parcel 1 project area and to carry out all activities necessary for the completion of the assessment was granted by the proponent on August 11, 2021.

Parcel 2 is comprised of three non-contiguous properties on portions of Lot 21, Concession 2, Lots 23 and 24, Concession 2, and Lot 22, Concession 1, for a total of 34.4 hectares, and Parcel 3 consists of a single 12.7-hectare property in the southeast portion of Lot 22, Concession 2 (Figure 2). The Stage 1 and 2 Archaeological Assessments of Parcel 2 and Parcel 3 are being conducted under Ministry Project Information Forms P449-0556-2021 and P449-0552-2021, respectively.

1.2 Historical Context

The purpose of this section is to describe the past and present land use and settlement history of the project area, and any other relevant historical information gathered through the Stage 1 background research.

Historically, the project area was located in the south of Lots 22 to 24, Concession 2 in the Geographic Township of Humberstone, County of Welland.

Currently, the Parcel 1 project area consists of one 12.6-hectare agricultural property (758 Killaly Street East) on the east side of Snider Road on Lot 22 and a much larger, 62.1-hectare block comprised of seven contiguous properties (mixed agricultural, wooded, and vacant residential/commercial) on the west side of Snider Road on Lots 23 and 24 (Figure 3) (Niagara Region, no date). The Lot 23 lands consist primarily of one very large property parcel (26.3 hectares) with a second, much smaller parcel (0.4 hectare) at the northwest corner of Snider Road and Killaly Street East, neither of which is currently assigned a street address. The Lot 24 lands consist of five property parcels, two of which have assigned street



addresses: 442 Killaly Street East¹ (31.2 hectares), which comprises the majority of the Lot 24 lands, and 398 Killaly Street East (0.5 hectare), which is a small, vacant parcel in the southwest corner of the project area. The three other properties comprising the Lot 24 lands consist of a 3.3-hectare parcel in the south end fronting Killaly Street East and two very small, 0.2-hectare adjacent parcels in the wooded northwest corner of the project area.

All eight properties comprising Parcel 1 are currently unoccupied. Two old barns and a shed located on the abandoned farm property at 442 Killaly Street East are the only remaining buildings within the project area; the farm was occupied by the Augustine family from the nineteenth century until the early twenty-first century.

1.2.1 Pre-Contact Settlement

Table 1 provides a general summary of the pre-contact Indigenous settlement history of southern Ontario.

Table 1: Pre-Contact Indigenous Temporal Culture Periods in Southern Ontario

Period	Description
Paleo 13,000 Before Present – 9,000 Before Present	 First human occupation of Ontario Astronomers/ Artists/ Hunters/ Gatherers/ Foragers Language Unknown Small occupations Non-stratified populations

¹ Note the current property limits for the 442 Killaly Street East address do not extend to Killaly Street East itself, and the primary driveway access to the property is off Elizabeth Street (Figures 2 and 3).



Period	Description		
Archaic 9,000 Before Present— 3,000 Before Present	 Astronomers/ Artists/ Hunters/ Gatherers/ Foragers Small occupations Non-stratified populations Mortuary ceremonialism Extensive trade networks for raw materials and finished objects 		
Early Woodland 3,000 Before Present— 2,400 Before Present	 Astronomers/ Artists/ Hunters/ Gatherers/ Foragers General trend in spring/summer congregation and fall/winter dispersal Small and large occupations First evidence of community identity Mortuary ceremonialism Extensive trade networks for raw materials and finished objects 		
Middle Woodland 2,400 Before Present— 1,300 Before Present, Transitional Woodland 1,300 Before Present— 1,000 Before Present	 Astronomers/ Artists/ Hunters/ Gatherers/ Foragers A general trend in spring/summer congregation and fall/winter dispersal into large and small settlements Kin-based political system Increasingly elaborate mortuary ceremonialism Incipient agriculture in some regions Longer term settlement occupation and reuse 		
Late Woodland (Early) Anno Domini 900– Anno Domini 1300	 Foraging with locally defined dependence on agriculture Villages, specific and special purpose sites Socio-political system strongly kinship based 		



Period	Description
Late Woodland (Middle) Anno Domini 1300– Anno Domini 1400	 Major shift to agricultural dependency Villages, specific and special purpose sites Development of socio-political complexity
Late Woodland (Late) Anno Domini 1400– Anno Domini 1650	 Complex agricultural society Villages, specific and special purpose sites Politically allied regional populations

1.2.2 Post-Contact Settlement

Between the Lakes Purchase (Treaty 3)

The project area is within Treaty 3, the "Between the Lakes Purchase." Following the 1764 Niagara Peace Treaty and the follow-up treaties with Pontiac, the English colonial government considered the Mississaugas to be their allies since they had accepted the Covenant Chain. The English administrators followed the terms of the Royal Proclamation and insured that no settlements were made in the hunting grounds that had been reserved for their use (Johnston, 1964; Lytwyn, 2005). In 1784, under the terms of the Between the Lakes Purchase signed by Sir Frederick Haldimand and the Mississaugas, the Crown acquired over one million acres of land in-part spanning westward from near modern day Niagara-on-the-Lake along the south shore of Lake Ontario to modern day Burlington (Aboriginal Affairs and Northern Development Canada, 2016).

Geographic Township of Humberstone

The land within Humberstone Township was acquired by the British from the Mississaugas (Ojibwa) in 1784. The first township survey was undertaken in 1789, and the first legal settlers occupied their land holdings the same year. The township was named after a town in Lincolnshire, England. Humberstone was initially settled by disbanded soldiers, mainly Butler's Rangers, following the end of the American Revolutionary War. In 1805, Boulton noted that, due to its remote location from Niagara, Humberstone was "but little cultivated." The township began to flourish more following the construction of the first Welland Canal during the early 1830s. By the 1840s, the township was said to contain good land but that the farms were not well cultivated. The population was comprised



mainly of a large community of Pennsylvania Dutch settlers, with some Canadians and Americans (Armstrong, 1985:144; Boulton, 1805:82; Ott, 1967; Rayburn, 1997:163; Smith, 1846:84).

Early Development of Port Colborne

The City of Port Colborne is located at the Lake Erie end of the Welland Ship Canal. First named Gravelly Bay, and later renamed in honour of the Lieutenant-Governor of Upper Canada, Sir John Colborne, the village was established in 1832, when the Welland Canal was extended in a direct line to Lake Erie from the Chippawa Creek, or Welland River, and a lock was constructed near the settlement. The settlement was laid out on parts of Lots 26, 27, and 28, Concession 1, and registered plans of subdivision for this village date from 1847 to 1863.

Port Colborne became a port of entry during the nineteenth century and was served by the Buffalo and Lake Huron Railway (later the Grand Trunk Railway) and the Welland Railway. In 1873, the population of the village was about 1,500 and there were several stores and hotels, as well as a brewery (Crossby, 1873:256). By 1876, there was one public and one separate school, four churches and burial grounds, a town hall, one grist mill and one sawmill, three planning mills, a sash and door factory, one bank, two telegraph offices, and a grain elevator, and a protective pier with a lighthouse extended into Lake Erie on the west side of the canal. Port Colborne became a town in 1918 and later incorporated as a city in 1966 (Wainfleet Historical Society, 1992:281-289; City of Port Colborne, 1970; Page, 1876:11; Rayburn, 1997:276; Scott, 1997:182; Winearls, 1991:783-784).

1.2.3 Review of Map Sources

A review of nineteenth- and early twentieth-century mapping was completed to determine if these sources depict any nineteenth-century Euro-Canadian settlement features that may represent potential historical archaeological sites within or adjacent to the project area. Historical map sources are used to reconstruct/predict the location of former features within the modern landscape by cross-referencing points between the various sources and then georeferencing them in order to provide the most accurate determination of the location of any property from historical mapping sources. The results can be imprecise (or even contradictory) because sources of error, such as the vagaries of map production,



differences in scale or resolution, and distortions caused by the reproduction of the sources, introduce error into the process. The impacts of this error are dependent on the size of the feature in question, the constancy of reference points on mapping, the distances between them, and the consistency with which both are depicted on historical mapping.

In addition, not all settlement features were depicted systematically in the compilation of these historical map sources, given that they were financed by subscription, and subscribers were given preference with regards to the level of detail provided. Thus, not every feature of interest from the perspective of archaeological resource management would have been within the scope of these sources.

Figures 4 and 5 show the project area overlaid on the 1862 Tremaine Map of the Counties of Lincoln and Welland (Tremaine & Tremaine, 1862) and the 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland (Page, 1876). On both maps, the project area occupies the majority of the south halves of Lots 23 and 24, Concession 2, and the southwest portion of the southern half of Lot 22, Concession 2. In 1862, the south halves of Lots 22, 23, and 24, Concession 2, were owned by J. Stone, George Augustine, and Samuel Augustine, respectively. By 1876, the south half of Lot 22, was owned by Henry Stone, while the ownership of Lots 23 and 24 remained unchanged. Parcel 1 fronts the settlement roads of present-day Elizabeth Street to the west (west limit of Lot 24) and Killaly Street East to the south, and the north-south Snider Road divides the Lot 23 and Lot 22 portions in the east part. The Fort Erie Road (present-day Highway 3) is depicted crossing east-west through the centre of the lots north of the project area, within approximately 100 metres of Parcel 1's northwest limit. The 1862 map does not depict individual structures, so any dwellings or farmsteads that may have been present within or in close proximity to the project area at this time are not represented. The 1876 atlas, however, indicates that there was a house and adjacent orchard on Samuel Augustine's (Lot 24) property in the southwest of Parcel 1 in a corresponding location to the recently abandoned farm at presentday 442 Killaly Street East. A watercourse is illustrated on both maps flowing south through the east half of Lot 22, passing the project area to the east and nearly abutting the project area at its southeast boundary.



Early topographic mapping was also reviewed for the presence of potential historical features. Land features, such as waterways, wetlands, woodlots, and elevation, are clearly illustrated on this series of mapping, along with roads and structure locations. Figure 6 illustrates the project area located on the 1907 Welland topographic map (Department of Militia and Defence, 1907). The project area is depicted just below the 600-foot (182 metre) elevation contour. The map shows the property once again fronting Elizabeth Street to the west and Killaly Street East to the south, with Snider Road cutting north-south through the east half. The map also shows the northwest corner extending directly to the south side of Highway 3; however, the placement of Highway 3 on the map is incorrect, as the actual location of the road is approximately 85 metres north of the northwest project area limit. There are two buildings illustrated in the southwest of the property in a corresponding location to the house and orchard on the previous 1876 map and the recently abandoned farm at 442 Killaly Street East. A third building is now illustrated in the northeast part of the project area west of Snider Road, and the watercourse from previous mapping has been depicted to flow west through the project area closer to its present location. It is inferred that this relocation of the watercourse represents the channelization associated with the first iteration of the Wignell Drain. A bridge is indicated where the Wignell Drain crosses Snider Road and enters the project area in its northeast corner. The majority of the project area has been cleared for agriculture, but there are small, wooded areas indicated in the northwest corner, centre, and in the southeast portion on either side of Snider Road near the Wignell Drain.

1.2.4 Review of Aerial Imagery

In order to further understand the previous land use on the project area, historical and modern aerial imagery was consulted. Figure 7 depicts the subject property on aerial photographs from 1934, 2000, and 2010. The image from 1934 (Ministry of Natural Resources, 1934) shows the project area as comprised of several agricultural fields, with a large farmstead in the southwest (Lot 24) and a smaller farmstead fronting Killaly Street East at the southeast limit east of Snider Road (Lot 22). The southwest farm, with driveway access off Elizabeth Street, corresponds to the location of structures on the previous 1876 and 1907 maps. Areas of scrub dotted with trees are visible in the northwest corner, centre, and



southeast of the project area. The Wignell Drain is visible approaching the project area from the northeast, following the north limit of the project area in Lot 22, and bending south adjacent to east side of Snider Road before crossing the road and re-entering the project area in the centre-east of Lot 23. It then bends through the southeast of the property, exiting at the south limit of Parcel 1 on the west side of Snider Road.

The images from 2000 and 2010 (Niagara Region, no date) show that the scrub areas located in the centre and in the southeast portion west of Snider Road (bordering the Wignell Drain) on the 1934 image had grown into more densely treed areas by the beginning of the twenty-first century, as had the northern portion of the northwest corner. The southern part of the once-scrubby northwest corner, however, was cleared for agriculture sometime after 1934. The previously treed area in the southeast corner of the project area east of Snider Road was also cleared for agriculture, and the 2000 image indicates the adjacent farm formerly located on the Lot 22 portion (currently 758 Killaly Street East; see Figure 3) has been abandoned and all structures demolished except for a large barn that was built after the 1934 image was taken; the remaining barn was demolished by 2010.

The 2000 image shows the large southwest farm on Lot 24 (currently 442 Killaly Street East; see Figure 3) is still occupied, and several large barns have been added to the farm over the years. The farm also now has driveway access to both Elizabeth Street and Killaly Street East. By 2010, however, the farm was clearly abandoned, and the house and majority of the farm buildings demolished.

Between 1934 and 2000 there were a number of structures built on the formerly ploughed southwest corner of Lot 24 at the intersection of Killaly Street East and Elizabeth Street, several of which are located just inside the southwest limit of the project area; by 2010, those buildings within the project area (currently 398 Killaly Street East) had been removed but the ones outside the project area limits remain. The 2000 and 2010 images also show a modern school complex (Saint Thérèse Catholic Elementary School, 530 Killaly Street East) in the southeast portion of the Lot 23 lands where the property boundary bends north and east around a block of land on the north side of Killaly Street.



1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the project area, its environment characteristics (including drainage, soils, surficial geology, topography), and current land use and field conditions.

1.3.1 Registered Archaeological Sites

In order that an inventory of archaeological resources could be compiled for the project area, three sources of information were consulted: the site record forms for registered sites housed at the Ministry, published and unpublished documentary sources, and the files of Archaeological Services Inc.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database, which is maintained by the Ministry. This database contains archaeological sites registered within the Borden system. The Borden system was first proposed by Doctor Charles E. Borden and is based on a block of latitude and longitude. Each Borden block measures approximately 13 kilometres east to west by 18.5 kilometres north to south and is referenced by a four-letter designator. Sites within a block are numbered sequentially as they are found. The subject property is located in the centre-east of the AfGt Borden block.

Four archaeological sites have been registered on the project area and another nine sites have been registered within an approximate one-kilometre radius (Ministry of Heritage, Sport, Tourism and Culture Industries, 2021). A summary of all fourteen sites is available in Appendix A.

The four sites located on the project area are Snider 2 (AfGt-36), Augustine 1 (AfGt-41), Augustine 2 (AfGt-42), and Augustine 3 (AfGt-43). All four sites are Indigenous lithic scatters that were documented on the surface of the ploughed agricultural lands: the Snider 2 site (AfGt-36) was found just east of Snider Road and the other three sites were found on the west side of Snider Road (Pengelly, 1984). See section 1.3.2 below for further discussion of these sites.

Two other Indigenous sites, Snider 1 (AfGt-35) and Snider 3 (AfGt-37), are approximately 30 metres east of the project area, and another two Indigenous



sites, Ott 3 (AfGt-56) and Ott 1 (AfGt-54), are approximately 200 metres and 230 metres northeast of the project area, respectively.

1.3.2 Previous Assessments

Two archaeological assessments are known to have been completed on the project area.

In 1984, James W. Pengelly conducted an archaeological survey of the Wignell Drain as part of the Archaeological Conservation Program, an initiative to identify and record archaeological sites in the Regional Municipality of Niagara (Pengelly, 1984; Pengelly and Pengelly, 1986). The work was conducted under Ontario Ministry of Citizenship and Culture (now the Ministry) licence #84-90.

The survey was carried out from 1984 to 1985 over approximately one square kilometre of the 18-square-kilometre Wignell Drain area and resulted in the identification of 30 sites dating from the Middle Archaic to the Contact periods (Pengelly and Pengelly, 1986:3-5). Of these, two of Pengelly's clusters of sites, the Augustine Sites and the Snider-Ott sites, are on or immediately adjacent to the Parcel 1 project area under review²; all of these sites were encountered during pedestrian survey of the agricultural fields.

The Augustine cluster consist of Augustine 1 (AfGt-41), Augustine 2 (AfGt-42), and Augustine 3 (AfGt-43), and are located to the west and south of the wooded area in the centre of the project area. Each site was surveyed at one-metre intervals on a minimum of one occasion and yielded Indigenous lithic artifacts. Augustine 1 (AfGt-41), immediately west of Snider Road and north of the bridge under which the Wignell Drain enters the project area, was a small scatter consisting of flakes, cores, debitage, a scraper, and a non-diagnostic blade fragment (Pengelly,

² The locations of the sites discussed in this report are based on field mapping supplied in Pengelly's 1984 report (Pengelly, 1984: Figures 4 and 6), which shows the sites relative to known topographic features and current roadways. These locations may deviate from location coordinates listed in the Ontario Archaeological Sites Database, which were recalculated from their original North American Datum 27 coordinates during the mass data migration to the new Ontario Past Portal system in 2015.



1984:9). Augustine 2 (AfGt-42), located adjacent to the west edge of the wooded area, consisted of a blade fragment, a scraper, and flakes of Onondaga chert (Pengelly, 1984:9-10). The Augustine 3 (AfGt-43) site was found south of the southwest end of the wooded area and consisted of Onondaga flake fragments (including thermally altered specimens), cores, a biface, and a diagnostic projectile point that Pengelly (1984:10) describes as a Late Archaic "Dustin-Lamoka" point.

The Snider-Ott complex consists of the Snider 1 (AfGt-35), Snider 2 (AfGt-36), Snider 3 (AfGt-37), Ott 1 (AfGt-54), Ott 2 (AfGt-55), Ott 3 (AfGt-56), Ott 4 (AfGt-57), and Ott 5 (AfGt-58) sites, which were documented east of Snider Road in Lot 22 and Lot 21, Concession 2. The Snider sites are all on or within 50 metres of the present project area, whilst the five Ott sites are all more than 50 metres northeast of the project area. The Snider II (AfGt-36) site, the only site registered within the current project area limits, was encountered immediately east of Snider Road in the south of Lot 22, Concession 2, and comprised a 60-metre by 40-metre surface scatter consisting of lithic flakes (including thermally altered and retouched specimens), cores, six scrapers, a preform, a biface, and a unifacial knife (Pengelly, 1984:13). The other two Snider sites are located immediately east of the present Parcel 1 project area (within the Parcel 3 lands) in the vicinity of the watercourse indicated on the nineteenth-century historical mapping (Figures 4 and 5), before the Wignell Drain diverted drainage to the west side of Snider Road. The Snider I (AfGt-35) site, approximately 0.5 hectare in size, consisted of a scatter of lithic flakes, cores, eight bifaces, five scrapers, blade fragments, one preform, and a diagnostic Otter Creek projectile point indicative of a Middle Archaic occupation (Pengelly, 1984:12-13). The Snider 3 (AfGt-37) site, which was encountered to the north of the Snider 1 (AfGt-35) site, consisted of a scatter of lithic flakes, cores, scrapers, bifaces, utilized flakes, a preform blade, and a nondiagnostic projectile point; the overall artifact scatter measured approximately 60 metres by 40 metres and was comprised of four distinct loci of activity (Pengelly, 1984:13).

In 2009, Archaeological Services Inc. conducted a Stage 1 Archaeological Assessment for a proposed new South Niagara East-West Arterial Road Corridor (Archaeological Services Inc., 2009). The purpose of the overall study was to



confirm the need and preferred route for a new or improved east to west arterial road in the southern tier of the Regional Municipality of Niagara. The study area, located east of the Welland Canal, spanned over 200 square kilometres across four townships (Humberstone, Bertie, Crowland, and Willoughby), with the southern limit in Port Colborne terminating at Killaly Street East; the entire Port Colborne Lands Parcel 1 project area currently under review falls within the southwest corner of the 2009 study area. The Stage 1 assessment, which consisted of a map-based review and did not include a field review, determined that 94% of the overall assessment area, including the majority of the current Parcel 1 project area, had potential for the recovery of archaeological sites (Archaeological Services Inc., 2009: Figure 4F). The final assessment report recommended an archaeological field review of the preferred route chosen for the east to west arterial road be undertaken to confirm the extent of archaeological potential along the chosen route.

No other archaeological assessments are known to have been completed on or within 50 metres of the project area.

1.3.3 Physiography

The subject property is in the Haldimand Clay Plain physiographic region. The Haldimand Clay Plain is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500-square kilometres (Chapman and Putnam, 1984:156-159; MacDonald, 1980:3). Generally, this region is flat and poorly drained, although it includes several distinctive landforms, including dunes, limestone pavements, back-shore wetland basins, and cobble, clay, and sand beaches.

A number of environmental sub-regions have been described in this part of the Niagara peninsula, including the Niagara Slough Clay Plain, the Fort Erie Clay Plain, the Calcareous Rock Plain (Onondaga Escarpment), the Buried Moraines, the Lake Erie Coast, and the Niagara River Valley (MacDonald, 1980). The distribution and nature of these sub-regions, and the specific environmental features they contain, have influenced land use in the region throughout history and pre-history. The majority of the project area is located on a clay plain, but the northwest corner overlies part of a limestone plain.



The surficial geology of the subject property consists of massive to well-laminated fine-textured glaciolacustrine deposits of silt and clay with minor sand and gravel (Ontario Geological Survey, 2000). There is an area of Paleozoic bedrock that extends northwest across the project area from the southwest corner to the central woodlot, where it presents as exposed bedrock.

The project area is within the Lake Erie North Shore watershed. Much of the woodlot in the northwest corner of the project area is a regulated wetland (Niagara Peninsula Conservation Authority, 2022). The Wignell Drain flows south through the east part of the project area and then continues south to empty at the north shore of Lake Erie (Ministry of Natural Resources and Forestry, 2020).

1.3.4 Existing Conditions

The Parcel 1 lands encompass eight separate property parcels ranging in size from 0.2 hectare to 31.2 hectares, for an overall project area of approximately 74.7 hectares (Figure 3). The project area fronts Killaly Street East to the south and Elizabeth Street to the west, and the north-south Snider Road separates the eastern-most portion of the project area (758 Killaly Street on Lot 22) from the larger portion of the project area on Lots 23 and 24. It is situated at the eastern edge of the developed part of Port Colborne and is bordered by a large recreational facility and residential neighbourhoods to the west and southwest and by undeveloped rural-agricultural lands to the north, east, and southeast.

The majority of the project area is comprised of cultivated and fallow agricultural fields, with woodlots in the northwest corner, centre, and southeast corner of the larger block west of Snider Road. A hydro-electrical corridor runs north-south through the centre of Lot 24 in the west end of the project area, and a watercourse flows south along the west edge of the southeast woodlot in Lot 23. There are remnants of the former Augustine farm in the southwest portion of the project area (442 Killaly Street East property), but the house and most of the farm buildings were demolished in the early twenty-first century; two old barns and a small shed remain.



1.3.5 Review of Archaeological Potential

The Standards, Section 1.3.1 stipulates that undisturbed lands within 300 metres of primary water sources (lakes, rivers, streams, creeks), secondary water sources (intermittent streams and creeks, springs, marshes, and swamps), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches), and accessible and inaccessible shorelines (bluffs, swamps or marsh fields by the edge of a lake, sandbars stretching into marsh) are considered, at a generic level, to exhibit potential for Indigenous archaeological sites.

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in south-central Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most common variables used for predictive modelling of site location. The Wignell Drain flows through the project area (Figure 1). Historical mapping indicates that a watercourse flowed to the east of the project area in the nineteenth century. Mapping indicates that it was redirected by the early twentieth century to flow along the northeast boundary of the east part of the project area and through the centre of the property before exiting in the south (Figures 4, 5, and 6).

Other geographic characteristics that can indicate pre-contact archaeological potential include elevated topography (eskers, drumlins, large knolls, plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, and distinctive land formations that might have been special or spiritual places for Indigenous populations, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use by Indigenous peoples, such as burials, structures, offerings, and rock paintings or carvings. Resource areas, including food or medicinal plants (migratory routes, spawning areas, prairie) and scarce raw materials (quartz, copper, ochre, or outcrops of chert and bedrock), are also considered characteristics that indicate pre-contact archaeological potential.



For the post-contact period, Section 1.3.1 of the Standards stipulates those areas of early Euro-Canadian settlement, including places of early military or pioneer settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries, are considered to have archaeological potential. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks. Also considered to have archaeological potential are early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historical landmark or site, and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations.

The majority of early nineteenth-century farmsteads, which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth-century maps, are likely to be captured by the basic proximity to water model, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of concession roads and railroads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads and businesses. Accordingly, the Standards considers undisturbed lands within 100 metres of early settlement roads or railroads to have potential for the presence of Euro-Canadian archaeological sites.

In addition to the above criteria for Indigenous and historical archaeological potential, the Standards also defines potential buffers of 300 metres around registered Indigenous and historical archaeological sites. While no historical sites have been registered in the general vicinity, currently there are four Indigenous sites registered on the project area and another four Indigenous sites registered within 300 metres of the project area.

In addition to the presence of water, a bedrock outcrop, and registered Indigenous sites, the project area fronts multiple historical roads and historical mapping indicates there was a farmstead located in the southwest part of the project area by at least the late nineteenth century (Figures 4, 5, and 6).



Therefore, the project area meets the criteria for both Indigenous and Euro-Canadian archaeological potential.

2.0 Field Methods

The optional field review was not required as part of this assessment, as per the Standards, Section 1.2. In order to provide images to support the analysis, conclusions, and recommendations of this report, current orthographic imagery (Figure 3) and images available through Google Earth Street View (Images 1 through 6) were reviewed (Google Earth Pro, 2021). The Google Earth Street View images were taken in April 2021 and are presented in Section 7.0 of this report. Photo locations and assessment conclusions have been compiled on project mapping (Figure 8).

2.1 Findings

The project area consists of agricultural fields, three areas of trees and scrub, and an abandoned farm property (Images 1 through 6). Upon review of the available background sources, including historical and modern mapping and aerial imagery, it is concluded that the entire project area is considered to have archaeological potential and will require a Stage 2 Archaeological Assessment (Figure 8).

3.0 Analysis and Conclusions

Archaeological Services Inc. was contracted by Elite MD Developments to complete a Stage 1 Archaeological Assessment of the Port Colborne Lands Parcel 1, part of Lots 22, 23, and 24, Concession 2, Geographic Township of Humberstone, Welland County, now in the City of Port Colborne, Regional Municipality of Niagara. The Parcel 1 project area is approximately 74.7 hectares and is the largest of three distinct project areas comprising the Port Colborne Lands development. Parcels 2 and 3 are comprised of lands located to the north, northeast, east, and south of Parcel 1 and will be assessed separately.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the project area, along with nineteenth- and twentieth-century settlement



trends. This research has led to the conclusion that there is potential for both Indigenous and Euro-Canadian archaeological resources on the project area.

The Stage 1 background review has determined that the entire project area retains archaeological potential and will require a Stage 2 Archaeological Assessment.

4.0 Recommendations

In light of these results, the following recommendation is made:

- 1. Prior to any land-disturbing activities within the project area, a Stage 2
 Archaeological Assessment must be conducted in accordance with the
 Ministry of Heritage, Sport, Tourism and Culture Industries' 2011 Standards
 and Guidelines for Consultant Archaeologists.
 - a) The Stage 2 Archaeological Assessment of all agricultural or open lands within the project area must be carried out by means of a pedestrian survey. The lands must be ploughed in advance of survey and allowed to weather for at least one substantial rainfall. Ploughing must be deep enough to provide total topsoil exposure, but not deeper than previous ploughing. The pedestrian survey must be completed at five-metre transect intervals, as outlined in Section 2.1.1 of the Standards and Guidelines for Consultant Archaeologists.
 - b) The Stage 2 Archaeological Assessment of all remaining portions of the project area where ploughing is not possible or viable must be carried out by means of a test pit survey. All test pits must be excavated at least five centimetres into sterile subsoil, with all soils being screened through six-millimeter wire mesh to facilitate artifact recovery. All test pits must be at least 30 centimetres in diameter and backfilled upon completion. Test pits must be excavated at five-metre transect intervals, as outlined in Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists*.

NOTWITHSTANDING the results and recommendations presented in this study, Archaeological Services Inc. notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or



identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the Ministry of Heritage, Sport, Tourism and Culture Industries must be immediately notified.

The above recommendations are subject to Ministry approval, and it is an offence to alter any archaeological site without Ministry of Heritage, Sport, Tourism and Culture Industries concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of Ministry of Heritage, Sport, Tourism and Culture Industries approval has been received.

5.0 Advice on Compliance with Legislation

Archaeological Services Inc. advises compliance with the following legislation:

- This report is submitted to the Ministry 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. 2005, 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 field work and report recommendations ensure the conservation, preservation and protection 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 regards 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 field work 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 Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.
- Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, nor may artifacts be removed from them, except by a person holding an archaeological license.

6.0 Bibliography and Sources

Aboriginal Affairs and Northern Development Canada. (2016). *Between the Lakes Purchase and Collins Purchase, No. 3.* Treaty Texts – Upper Canada Land Surrenders. https://www.aadnc-aandc.gc.ca/eng/1370372152585/1370372222012#ucls5

Armstrong, F. H. (1985). *Handbook of Upper Canadian Chronology*. Dundurn Press.

Archaeological Services Inc. (2009). Stage 1 Archaeological Assessment
(Background Research) South Niagara East-West Arterial Road Corridor,
Regional Municipality of Niagara, Ontario. Report on file with the Ontario
Ministry of Heritage, Sport, Tourism and Culture Industries.

Boulton, D. (1805). *Sketch of His Majesty's Province of Upper Canada* (Reprinted in Toronto by the Baxter Publishing Company, 1961). C. Rickaby.



- Chapman, L. J., and Putnam, F. (1984). *The Physiography of Southern Ontario* (Vol. 2). Ontario Ministry of Natural Resources.
- City of Port Colborne. (1970). *Ciy of Port Colborne Centennial 1870-1970*. Moss Press.
- Crossby, P. A. (1873). Lovell's Gazetteer of British North America. John Lovell.
- Department of Militia and Defence. (1907). Welland Sheet [Map].
- Google Earth Pro. (2021). 1985—2021 Satellite Aerial Imagery [Map]. Google Inc.
- Johnston, C. E. (1964). The Valley of the Six Nations: A Collection of Documents on the Indian Lands of the Grand River. The Champlain Society.
- Lytwyn, V. P. (2005). Historical research report: Aboriginal Settlement and Use of the North Pickering Development Planning Area and Adjacent Lands, 1690-1923.
- MacDonald, I. D. (1980). *Life Science Features of the Haldimand Clay Plain Physiographic Region*. Ontario Ministry of Natural Resources, Parks and Recreation Section, Central Region.
- Ministry of Culture (now the Ministry). (1990). *Ontario Heritage Act, R.S.O. c.O.18,* 1990 [as amended in 2021].
- Ministry of Heritage, Sport, Tourism and Culture Industries. (2021). *Ontario's PastPortal*. PastPortal. https://www.pastport.mtc.gov.on.ca
- Ministry of Municipal Affairs and Housing. (1990). *Planning Act, R.S.O. 1990, c. P.13, (1990)*.
- Ministry of Natural Resources. (1934). Aerial Photographs [Map].
- Ministry of Natural Resources and Forestry. (2020). *Ontario Flow Assessment Tool* [Map]. Ontario Flow Assessment Tool. https://www.lioapplications.lrc.gov.on.ca/OFAT/index.html?viewer=OFAT. OFAT&locale=en-ca



- Ministry of Tourism and Culture (now the Ministry). (2011). *Standards and Guidelines for Consultant Archaeologists*. Cultural Programs Branch, Ontario Ministry of Tourism and Culture.
- Niagara Peninsula Conservation Authority. (2022). *Niagara Peninsula Conservation Authority Watershed Explorer [Map]*. https://www.arcgis.com/apps/webappviewer/index.html?id=c7555050c8f2 4a7cbc829395557a7988
- Niagara Region. (n.d.). *Niagara Navigator [Map]*. https://maps.niagararegion.ca/navigator/
- Ontario Geological Survey. (2000). *Quaternary Geology of Ontario* [Map]. https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearth/quaternary-geology
- Ott, E. F. (1967). A Condensed History of the Township of Humberstone in the County of Welland, To Commemorate Canada's Centennial 1967.
- Page, H. R. (1876). Illustrated Atlas of the Counties of Lincoln & Welland, Ontario [Map]. H. R. & Page Co.
- Pengelly and Pengelly, J. and S. (1986). A Port Colborne Archaeological Survey. Kewa, Newsletter of the London Chapter, Ontario Archaeological Society, 86(6), 3–21.
- Pengelly, J. (1984). *The Port Colborne Archaeological Survey.* 1984—Year 1. Volume 1. Ontario Ministry of Citizenship and Culture.
- Rayburn, A. (1997). Place Names of Ontario. University of Toronto Press.
- Scott, W. B. (1997). *Ontario Place Names: The Historical, Offbeat or Humorous Origins of More Than 1,000 Communities*. Lone Pine Publishing.
- Smith, W. H. (1846). Smith's Canadian Gazetteer.
- Tremaine, G. M., & Tremaine, G. R. (1862). *Map of the Counties of Lincoln and Welland* [Map].



Wainfleet Historical Society. (1992). *Chronicles of Wainfleet Township: 200 Years of History*. Book Committee Wainfleet Historical.

Winearls, J. (1991). *Mapping Upper Canada 1780-1867. An Annotated Bibliography of Manuscript and Printed Maps.* University of Toronto.



7.0 Images

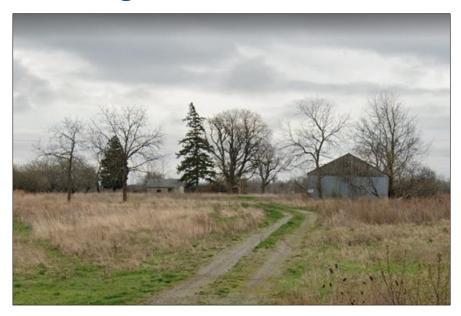


Image 1: View of extant farm buildings at 442 Killaly Street East (Lot 24) in the southwest of Parcel 1, looking east from Elizabeth Street (April 2021).



Image 2: View of the south part of 758 Killaly Street East (Lot 22) in the southeast of Parcel 1, looking north (April 2021).



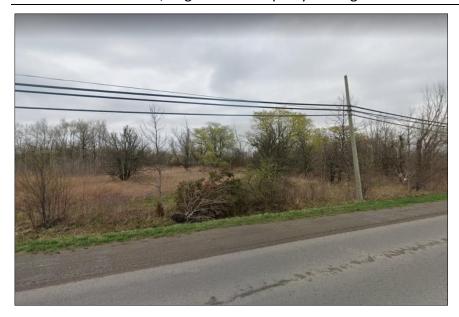


Image 3: View of scrub area adjacent to the watercourse in the south of Parcel 1 (Lot 23), looking northeast (April 2021).



Image 4: View of the south part of Parcel 1 (Lot 24), looking north across fallow agricultural field (April 2021).





Image 5: View of the central-west part of Parcel 1 (Lot 24), looking northeast across agricultural field from the west limit of the project area (April 2021).



Image 6: View of wooded area in the northwest corner of the project area (Lot 24), looking southeast (April 2021).



8.0 Maps

See following pages for detailed assessment mapping and figures





Figure 1: Location of the Project Area

Figure 2: Port Colborne Lands Development - Parcels 1-3

Figure 3: Existing Conditions of the Project Area

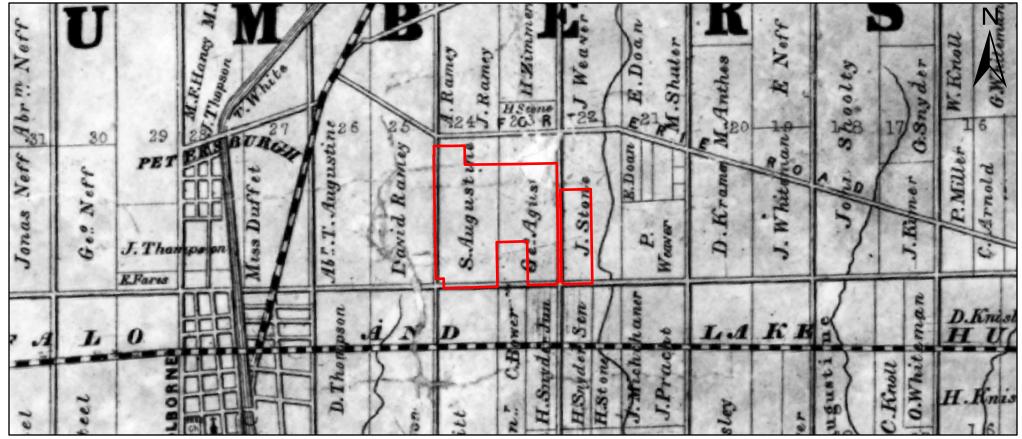


Figure 4: Project Area Located on the 1862 Tremaine Map of the Counties of Lincoln and Welland



Figure 5: Project Area Located on the 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland

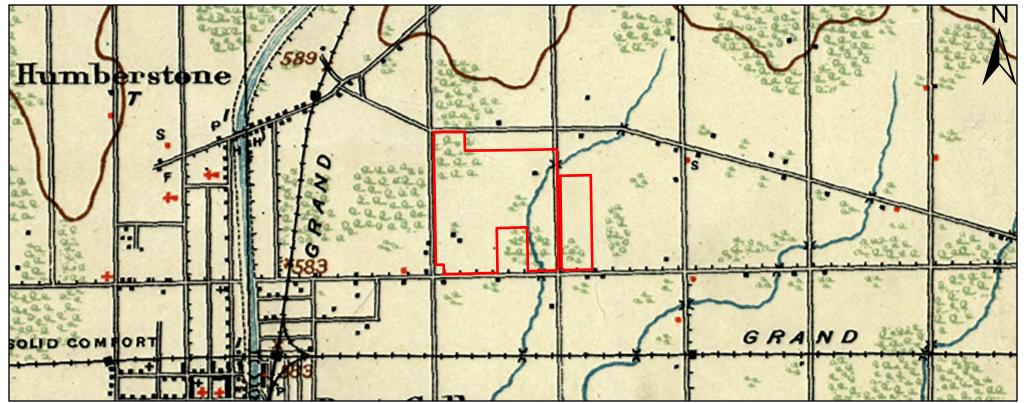
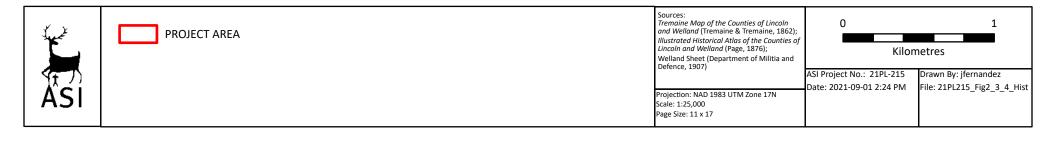


Figure 6: Project Area Located on the 1907 Welland Topographic Map





1934







Figure 8: Stage 1 Archaeological Assessment Results

9.0 Appendix A: Registered Archaeological Sites within a One-Kilometre Radius of the Project Area

Thirteen archaeological sites have been registered with an approximate one-kilometre radius of the subject property (the Ministry, 2021). Of these, four are located on the subject property, including Snider 3 (AfGt-37), a Middle Archaic campsite, and Augustine 1 (AfGt-41), Augustine 2 (AfGt-42), and Augustine 3 (AfGt-43), all lithic scatters.

Borden	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AfGt-35	Snider 1	Pre-contact Indigenous	Unknown	Pengelly 1984
AfGt-36	Snider 2	Pre-contact Indigenous	Unknown	Pengelly 1984
AfGt-37	Snider 3	Middle Archaic	Campsite	Pengelly 1984
AfGt-41	Augustine 1	Pre-contact Indigenous	Findspot	Pengelly 1984
AfGt-42	Augustine 2	Pre-contact Indigenous	Findspot	Pengelly 1984
AfGt-43	Augustine 3	Pre-contact Indigenous	Findspot	Pengelly 1984
AfGt-54	Ott 1	Pre-contact Indigenous	Unknown	Pengelly 1984

Borden	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AfGt-55	Ott 2	Pre-contact Indigenous	Unknown	Pengelly 1984
AfGt-56	Ott 3	Pre-contact Indigenous	Unknown	Pengelly 1984
AfGt-57	Ott 4	Pre-contact Indigenous	Unknown	Pengelly 1984
AfGt-59	Ott 5	Early Archaic; Late Archaic; Late Woodland	Quarry	Pengelly 1984; Woodley 1997
AfGt-196	Chippawa 1	Pre-contact Indigenous	Unknown	O'Neal 2009
AfGt-197	Chippawa 2	Pre-contact Indigenous	Unknown	O'Neal 2009