Stage 1 and 2 Archaeological Assessment of Land North of Quaker Road, Lot 228, Former Geographic Township of Thorold, County of Welland, Now in the Cities of Welland and Thorold, Regional Municipality of Niagara

Revised Report 2

Prepared for:

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Project Information Form: P398-0103-2021

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Executive Summary

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of Land North of Quaker Road, Lot 228, Former Geographic Township of Thorold, County of Welland, now in the Cities of Welland and Thorold, Regional Municipality of Niagara. The overall size of the subject property is approximately 40 hectares; the south half (approximately 19.5 hectares) falls within the modern limits of the City of Welland and the north half (approximately 20.5 hectares) falls within the modern limits of the City of Thorold. Permission to access the property and to carry out all activities necessary for the completion of the assessment was granted by the proponent on June 24, 2021.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the property, along with nineteenth- and twentieth-century settlement trends. This research indicated there was potential for the presence of both Indigenous and Euro-Canadian archaeological resources on the subject property.

The Stage 2 field assessment was conducted on June 30, July 14-15, and August 25, 2021, and on April 27, July 4-7 and 28-29, and August 4-5 and 17-19, 2022 by means of a combined pedestrian and test pit survey in all areas of archaeological potential. The assessment resulted in the identification two Indigenous findspots and four Indigenous sites.

None of the Indigenous findspots or sites meet the criteria for Stage 3 Archaeological Assessment and are considered free of any further archaeological concern. As such, it is recommended that no further archaeological assessment of the property be required.

Project Personnel

- **Senior Project Manager:** Jennifer Ley, Honours, Batchelor of Arts (R376), Lead Archaeologist, Manager, Planning Assessment Division
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- **Project Director**: Jamie Houston-Dickson
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1.0 Project Context

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of Land North of Quaker Road, Lot 228, in the former Geographic Township of Thorold, County of Welland, now in the Cities of Welland and Thorold, Regional Municipality of Niagara (Figure 1). The overall size of the subject property is approximately 40 hectares; the south half (approximately 19.5 hectares) falls within the modern limits of the City of Welland and the north half (approximately 20.5 hectares) falls within the modern limits of the City of Thorold.

1.1 Development Context

This assessment was conducted under the senior project management of Jennifer Ley (R376), and the project management and project direction of Jamie Houston-Dickson (P398); the work was completed under Ministry of Tourism, Culture and Sport (hereafter referred to as the Ministry) Project Information Form: P398-0103-2021. All activities carried out during this assessment were completed as due diligence prior to a proposed development application and conform to the requirements of the Provincial Policy Statement (Ministry of Municipal Affairs and Housing, 2020) under Section 3 of the *Planning Act* (Ministry of Municipal Affairs and Housing, 1990).

All work was completed in accordance with the *Ontario Heritage Act* (Ministry of Citizenship and Culture [now the Ministry],1990) and the *Standards and Guidelines for Consultant Archaeologists* (hereafter referred to as the Standards) (Ministry of Tourism and Culture [now the Ministry], 2011).

Permission to access the subject property and to carry out all activities necessary for the completion of the assessment was granted by the proponent on June 24, 2021. Buried utility locates were obtained prior to the initiation of fieldwork.

1.2 Historical Context

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

1.2.1 Pre-Contact Settlement

Southern Ontario has a cultural history that begins approximately 13,500 years ago and continues to the present. As there tends to be less widespread awareness of the depth of this pre-contact settlement history, or general knowledge of the societies that inhabited Ontario prior to the onset of Euro-Canadian settlement, a brief review of the prehistory of the area is necessary in order to provide an understanding of the various natural and cultural forces that have operated to create the archaeological sites that are found today.

Table 1 provides a general summary of the pre-contact Indigenous settlement history of southern Ontario from approximately 11,500 Before Common Era (B.C.E.) to the year 1650 Common Era (C.E.).

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

Period	Description
Paleo > 11,500 – 8,500 B.C.E.	• First human occupation of Ontario • Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • Language Unknown • Small occupations • Non-stratified populations

Period	Description
Archaic 8,500 – 1,000 B.C.E.	• Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • Small occupations • Non-stratified populations • Mortuary ceremonialism • Extensive trade networks for raw materials and finished objects
Early Woodland 1,000 – 450 B.C.E.	• 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 450 B.C.E. – 750 C.E. Transitional Woodland 600 – 900 C.E.	• 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) 900 – 1300 C.E.	• Foraging with locally defined dependence on agriculture • Villages, specific and special purpose sites • Socio-political system strongly kinship based

Period	Description
Late Woodland (Middle) 1300 – 1400 C.E.	• Major shift to agricultural dependency • Villages, specific and special purpose sites • Development of socio-political complexity
Late Woodland (Late) 1400 – 1650 C.E.	• 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 subject property 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).

Township of Thorold

The first legal settlers in Thorold Township were United Empire Loyalists, who arrived during and after the American Revolutionary War. Many of these early settlers were part of Butler's Rangers, Loyalists who fought under Lieutenant Colonel John Butler, arriving between 1784 and 1787. The first township survey was not undertaken until 1788. At that time, Thorold had not yet been named and it was simply known as "Township No. 9." A statement of expenses submitted to the Surveyor General's department for the work in Thorold showed the survey was done at least in part by Augustus Jones. Jones continued to be employed in

"making out the Plans of the Townships of this Settlement" in the late autumn of 1791, which included a "List of reduced Provincial Troops" settled in the area, as well as reports on features "towards the public utility" such as waterfalls, minerals and/or quarries, and the quality of the timber (Fraser, 1906; Mika and Mika, 1983:506).

By the early 1800s, roads had been constructed connecting many communities within the township and grist mills and sawmills were built to support the growing farming and lumbering activities. By 1817, the population was 830, and much of the land had been cleared. By 1846, approximately 49% of the privately-owned land in Thorold Township was under cultivation. The township was referred to as one of the "best settled townships in the Niagara District, containing a great number of excellent, well cleared farms." The land was described as "rolling," and well adapted to growing wheat, oats, barley, rye, and other crops. At that time, the township contained eight grist mills and five sawmills. The population stood at 2,284, and the total assessment for property was £49,699. In 1879, the Niagara, St. Catharines and Toronto Railway was extended through the township (Mika and Mika, 1983:505–506; Smith, 1846:191).

Quaker Road

Quaker Road was originally situated on land owned by Hon. Robert Hamilton, a wealthy Queenston merchant who purchased 7,900 acres in Welland County in 1799. The road's name stems from the number of Quakers who chose to settle in the southern part of Thorold Township and in nearby Pelham Corners, situated at the intersection of Quaker Road and Pelham Street. In 1926, the road became the first improved road in Thorold Township (Betti, 1967).

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 subject property. 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.

On both the 1862 *Tremaine Map of the Counties of Lincoln and Welland* (Tremaine & Tremaine, 1862) (Figure 2) and the 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland* (Page, 1876) (Figure 3) the subject property occupies all of Lot 228, under the ownership of Orin Bemiss/Bemis. The subject property fronts the historical concession roads of Quaker Road along the south, Merritt Road to the north and Cataract Road to the east. On the 1862 mapping, a single structure is depicted near the southwest corner of the subject property, fronting Quaker Road. In 1876, a single structure, now with an orchard, is depicted further east and set further back from Quaker Road then the structure depicted on the 1862 mapping, although they may likely represent the same dwelling. Neighbouring structures along Quaker Road in the vicinity of the property include homesteads and a schoolhouse, ranging from 47-70 metres distant. No sources of water are illustrated on or near the property on either map.

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. On the 1907 Niagara Topographic Map (Department of Militia and Defence, 1907) (Figure 4), the subject property is shown once again situated

between Quaker Road and Merritt Road with Cataract Road to the east. A frame house is depicted within the subject property, approximately 105 metres from Quaker Road, and appears to correspond with the dwelling location on the previous 1862 and 1876 mapping. Many of the structures surrounding the subject property in the previous mapping remain, including a brick schoolhouse depicted approximately 70 metres to the south, on the opposite side of Quaker Road. In contrast to the previous mapping, tributaries of the Welland River are depicted flowing through the subject property in the south and north and three bridges are depicted along each of the bordering roads. Contour lines within the subject property indicate an elevation of 600 feet (183 metres) above sea level.

1.2.4 Review of Aerial Imagery

In order to further understand the previous land use on the subject property, twentieth and twenty-first-century aerial imagery was reviewed (Figure 5).

The Brock University Digital Archive houses numerous series of historic aerial photographs of Ontario. One such image released by the National Air Photo Library provides a clear view of the conditions of the subject property in 1934[1]. (*Niagara Air Photo Index, 1934 Series*, 1934) (Figure 5). In the image, the subject property is within a rural agricultural setting, and as in the 1909 mapping, is bound by Merritt Road to the north, Quaker Road to the south and Cataract Road to the east. A farm complex, consisting of at least four buildings is set back from Quaker Road at the end of lane. An orchard is present surrounding the residence to the west and south. With the exception of the residence, orchard and small woodlot, the majority of the subject property is shown as agricultural with several fields extending from the boundary of Quaker Road to the boundary of Merritt Road. A tributary of the Welland River is shown flowing across the subject property at the south end to the north of the farm complex, along with many other areas of water indicated by darker ground to the north.

[1] As can be the case in early aerial imagery, please note that the positioning of the photographs which make up this image are slightly askew. The course of Cataract Road in reality bounds the subject property to the east, as per earlier and later mapping.

In 1965 (*Niagara Air Photo Index, 1965 Series*, 1965)(Figure 5), the farm complex remains, however the formal layout of the orchard is no longer visible, and is now a woodlot which has begun to expand to the north, and along both sides of the tributary in the south portion of the subject property. Similarly, the woodlot in the northwest corner has spread to the east. The road on the east side of the subject property (Cataract Road), has now been widened. By 1968 (*Niagara Air Photo Index, 1968 Series*, 1968) (Figure 5), the majority of the farm complex has been demolished, with a single building remaining on the west limit of the former layout.

By 2002, wooded lands on the property have expanded significantly along the north and south and the organized agricultural field system previously seen in earlier imagery is now barely visible (*Niagara Air Photo Index, 2002 Series*, 2002) (Figure 6). Wetland areas are now clearly visible in the northeast corner, and within pockets in the centre of the subject property. Various tributaries of the Welland River are shown traversing the subject property.

By 2010, the subject property remains much the same as shown in the 2002 aerial image (Google Earth Pro, 2021) (Figure 6). However, areas of more recent disturbance are visible in the northeast corner of the subject property with graded ground clearly shown surrounding pockets of water. This disturbance may have been the result of attempting to manage the abundance of water in this location. Further, two remnant building footprints from the former farm complex are visible in the south portion fronting Quaker Road. As previously, various tributaries of the Welland River are shown traversing the subject property.

By 2018, there is little change to the subject property (Brock University, 2018) (Figure 6). Wetland areas and pockets of water remain clearly visible in the centre and north portions.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the subject property, its environment characteristics (including drainage, soils, surficial geology, topography, etc.), 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 subject property, 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 Dr. Charles E. Borden and is based on a block of latitude and longitude. Each Borden block measures approximately 13 kilometres east-west by 18.5 kilometres north-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 AgGt Borden block.

While no archaeological sites have been registered within the limits of the subject property, a total of seven archaeological sites have been registered within a one kilometre radius (the Ministry, 2022). The closest of these are AgGt-262 and AgGt-263, both Indigenous lithic debitage sites located approximately 687 metres northwest of the subject property. A detailed summary of nearby sites is available in Appendix A.

1.3.2 Previous Assessments

In 2020, Archaeological Services Inc. completed a Stage 1 Archaeological Assessment on a 189 hectare study area in the City of Welland, as part of the Northwest Welland Secondary Plan (Archaeological Services Inc., 2020). This study area extended north up to the modern boundary shared by the cities of Welland and Thorold, and thus encompassed the entire south (Welland) half of the current subject property under review. The report concluded that approximately 99% (187.4 hectares) had the potential for the presence of significant Indigenous and Euro-Canadian archaeological resources, and it was recommended that any future developments within the study area must be preceded by a Stage 2 Archaeological Assessment. With respect to the current subject property under review, the entire south half situated within the study

area was identified as an area of Indigenous archaeological potential (Archaeological Services Inc., 2020: Figure 11), while the southernmost portion of the subject property—specifically the lands immediately surrounding the former house fronting Quaker Road, was identified as an area of historical archaeological potential (Archaeological Services Inc., 2020: Figure 12).

No other archaeological assessments are known to have been completed within 50 metres of the subject property.

1.3.3 Physiography

The subject property is situated within the sand plains of the Haldimand Clay Plain physiographic region of southern Ontario, which, at approximately 3,500 square kilometres, is among the largest of the 53 defined physiographic regions in southern Ontario (MacDonald, 1980:3; Chapman and Putnam, 1984:156-159). Extending from the Niagara Escarpment to Lake Erie, the clay plain was submerged in glacial Lake Warren around 12,500 years ago. As a result of the heavy lacustrine clay soils and low gradient, drainage is poor over most of the area, although it includes several distinctive landforms, including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins.

Within this part of the Niagara peninsula, a number of environmental sub-regions have been described, 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.

Soils within the subject property consist primarily of fine-textured glaciolacustrine deposits comprised of silt and clay with minor sand and gravel (Ontario Geological Survey, 2000).

The subject property overlaps the Twelve Mile Creek and Beaverdams watershed in the north and the Central Welland River watershed in the south (Niagara Peninsula Conservation Authority, no date). Environmental data recognizes

numerous unnamed watercourses traversing the subject property, all part of the network of tributaries of Welland River located several kilometres to the east. At least two of these areas fall within regulated floodplains (Figures 7-8) (Niagara Peninsula Conservation Authority, no date).

There are two large irregular-shaped woodlots in the property, one to the north, and the other to the south, and the majority of these woodlots are classified as a Provincially Significant Wetland (Figure 8) (Niagara Peninsula Conservation Authority, no date). Provincially Significant Wetlands are wetlands that constitute a significant part of Ontario's natural heritage and, in accordance with the 2020 Provincial Policy Statement, Section 2.1.4a under the Planning Act (Ministry of Municipal Affairs and Housing, 2020), cannot be subject to land development and/or site alteration. The limits of the Provincially Significant Wetland within the subject property are further surrounded by buffers of regulated lands (Figure 8) (Niagara Peninsula Conservation Authority, no date).

1.3.4 Existing Conditions

The subject property is approximately 40 hectares and is located within a mixed rural residential and agricultural area just north of the more densely populated neighbourhoods of the City of Welland (Figure 7). The south limit fronts Quaker Road and the east limit fronts First Avenue/Cataract Road, while the north limit boarders a narrow, straight east-west segment of unpaved trail that interrupts the alignment of Merritt Road. The west limit of the property is bordered by agricultural fields with a residence, areas of dense scrubland, woodlots and wetland.

The subject property currently consists of an irregular shaped agricultural field surrounded by dense scrub vegetation and woodlots on the north and south sides, with small watercourses and pockets of water throughout. The majority of the wooded areas are classified as Provincially Significant Wetland (Figure 8).

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, 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, 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. As outlined in Section 1.3.3 above, multiple watercourses cross through the subject property and there are recognized Provincially Significant Wetland areas in the wooded north and south ends.

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) 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 the 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, undisturbed lands within 100 metres of an early historical transportation route are also considered 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 sites. No archaeological sites have yet been registered within 300 metres of the subject property; however, it is acknowledged that there has been very limited archaeological investigation conducted in the nearby vicinity of the property.

While no archaeological sites have yet been identified nearby, there are multiple sources of water within the subject property and the property also fronts historic Quaker Road. Furthermore, nineteenth-century mapping identifies a homestead and orchard in the south end of the property. As a result, there is the potential for encountering both Indigenous and Euro-Canadian archaeological sites.

2.0 Field Methods

The Stage 2 field assessment was conducted in order to inventory, identify, and describe any archaeological resources extant within the subject property prior to development. The fieldwork took place on June 30, July 14-15 and August 25,

2021, and April 27, July 4-7, 28-29 and August 4-5 and 17-19, 2022. All fieldwork was conducted under the field direction of Sean Haefner (R1253) and was carried out in accordance with the Standards. The weather conditions were appropriate for the completion of fieldwork, permitting good visibility of the land features.

Representative photos documenting the field conditions during the Stage 2 fieldwork are presented in Section 8.0 of this report, and photo locations and field observations have been compiled on project mapping (Images 1-29; Figure 9). Field observations and photographs were recorded with a Trimble Catalyst Global Navigation Satellite System receiver using World Geodetic System 1984.

2.1 Areas of No Potential

The assessment was initiated by conducting a visual review in order to identify areas of no archaeological potential. Despite the prohibition against any type of land development and/or site alteration within the portions of the subject property designated as Provincially Significant Wetland, it was deemed prudent to include these areas in the visual review in order to fully evaluate the archaeological potential across the entire subject property.

During the visual review, approximately 48% of the subject property was identified as low and permanently wet (Figure 9). These low and wet areas include all areas of the north and south woodlots designated as Provincially Significant Wetland, some additional lands bordering the designated wetland in the north woodlot, and pockets of water/watercourses within the agricultural field (Images 1-13). In accordance with the Standards, Section 2.1, Standard 2a.i., these permanently wet areas are considered to have no archaeological potential and were not tested.

In addition to the permanently wet areas, approximately 1% of the subject property was found to be disturbed from past grading and construction activities, along with structural footprints (Figure 9). In the north, the area of disturbance consisted of a paved driveway and an artificial berm (Images 14-15), and in the south, a portion of the remnant farm complex (Image 16). In accordance with the Standards, Section 2.1, Standard 2b, these areas of deep and extensive land

disturbance are considered to have no archaeological potential and were not tested.

Overall, approximately 49% of the subject property was determined to have no archaeological potential (Figure 9).

2.2 Test Pit Survey

Approximately 21% of the property, consisting of areas of dense vegetation and scrub and the remaining portions of the north and south woodlots that were not documented as permanently wet during the initial visual review, was assessed by means of a test pit survey (Images 17-20; Figure 9). In accordance with the procedures outlined in the Standards, Section 2.1.2, the test pit survey of these areas of closed surface visibility was initiated at five-metre intervals. As per Section 2.1.8, Standard 2, however, survey intervals were increased to 10 metres in areas where significant ground disturbance was encountered; overall, 19% of the subject property was surveyed at five-metre intervals while 2% was tested at 10-metre survey intervals. All test pits were excavated stratigraphically by hand to no less than five centimetres into sterile subsoil when possible, and all soil was screened through six-millimetre mesh to facilitate artifact recovery. Test pits were examined for stratigraphy, cultural features, and evidence of fill. All test pits were at least 30 centimetres in diameter and excavated within one metre of all structures, disturbances or wetlands when possible. Upon completion, all test pits were backfilled.

The majority of the test pit survey was conducted in the south portion of the subject property fronting Quaker Road, while only small pockets in the north portion of the subject property were testable due to the permanently wet conditions documented throughout much of the northern woodlot. Soils were found to vary across the subject property.

Intact soil profiles were encountered in both the north and south portions of the subject property. Typical intact soil profiles in these areas consisted of approximately 20-40 centimetres of a brown (10YR 4/2) loamy A-horizon overlying either a very pale brown (10YR 7/4) clay loam or light brown (7.5YR 6/4) sandy-clay to clay-loam B-horizon (Images 21-22).

Disturbed test pit profiles were encountered in the north associated with an area containing a driveway and artificial berm. Disturbed soil profiles in this location consisted of approximately 15-25 centimetres of a dense brown (7.5YR 5/2) clay containing an asphalt and gravel mix, overlying a light brown (7.5YR 6/4) sandy-clay to clay-loam B-horizon (Image 23).

In the south, disturbed test pit profiles were encountered in four discreet areas, the largest of which was found on the west limit close to a communications tower in the adjacent field. In this area in particular, the disturbed soil profiles consisted of extremely dense clay fill deposits, overlying a greyish brown (10YR 4/1) sticky clay B-Horizon approximately 65 centimetres below the surface (Image 24).

Disturbed soil profiles in the area of the former farm complex and access lane fronting Quaker Road consisted of approximately 20-30 centimetres of brown (7.5YR 5/2) to greyish brown (10YR 5/2) loamy A-horizon containing significant amounts of refuse and building debris, overlying a very pale brown (10YR 7/4) clay loam B-horizon (Image 25).

2.3 Pedestrian Survey

The balance of the property, approximately 30%, consists of ploughed agricultural land that was assessed by means of a pedestrian survey at five-metre intervals (Images 26-29; Figure 9). In accordance with Section 2.1.1 of the Standards, the fields were ploughed and allowed to weather appropriately prior to survey, and ploughing was deep enough to provide total topsoil exposure but did not extend beyond the depth of previous ploughing. Visibility conditions were excellent at well over 80%.

When archaeological resources were encountered, survey transects were decreased to one-metre intervals over a 20-metre radius around all surface artifacts to determine whether they were isolated finds or part of a larger scatter. The locations of all recovered artifacts were recorded using a Trimble Catalyst Global Navigation Satellite System receiver with sub-metre accuracy.

3.0 Record of Finds

Two Indigenous findspots and four Indigenous sites were identified during the pedestrian survey (see Supplementary Documentation: Figure 1). All sites have been registered into the Ontario Archaeological Sites Database. The two Indigenous findspots did not meet the requirements for registry as defined by the Standards.

All artifacts encountered were collected and recorded individually according to provenience.

3.1 Inventory of Documentary and Material Records

Written field notes, annotated field maps, Global Positioning System logs and other archaeological data related to the subject property are located at Archaeological Services Inc.

The documentation and materials related to this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to His Majesty the King in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the Ontario Ministry of Tourism, Culture and Sport, and any other legitimate interest groups.

Table 2 provides an inventory and location of the documentary and material record for the project in accordance with Sections 6.7 and 7.8.2.3 of the Standards.

Table 2: Inventory of Documentary and Material Record

Material	Location	Comments
Written Field Notes, Annotated Field Maps, GPS Logs, etc.	Archaeological Services Inc., 528 Bathurst Street, Toronto, ON, M5S 2P9	Hard copy notes stored in Archaeological Services Inc. project folder 21PL-132; Global Positioning Satellite and digital information stored on Archaeological Services Inc. network servers.
Field Photography (Digital)	Same as above.	Stored on Archaeological Services Inc.network servers.
Research, Analysis and Reporting Materials (Various Formats)	Same as above.	Digital files stored on Archaeological Services Inc. network servers.
Artifacts	Same as above.	All artifacts collected stored by class and provenience. Artifacts stored in 12.7 x 20.32 centimetre plastic bags and further separated into 5.08 x 7.62 centimetre plastic bags. All material housed in a standard banker's box (width 30 centimetres, depth 38 centimetres, height 25 centimetres). Artifact assemblage stored in one box labeled: 21PL-132 Land at Quaker Road, Welland, Stage 1-2.

3.2 Indigenous Locations

A pre-contact Indigenous site is distinguished from a findspot by either the quantity of material encountered (three or more artifacts) or by the presence of a diagnostic artifact, for example, a projectile point. Whenever artifacts were encountered, a unique field designation (P-number) was assigned.

3.2.1 Findspots

A total of two isolated, non-diagnostic Indigenous findspots were documented across the subject property (see Supplementary Documentation: Figure 1). The field designation (P-number), artifact yield, artifact types, and any pertinent comments regarding each findspot are summarized in Table 3. A full catalogue of all findspot material is presented in Appendix B and the artifacts are displayed in Section 8.0 (Images 30-32). None of the Indigenous findspots require further assessment.

Table 3: Indigenous Findspots Documented within the Subject Property

Findspot	Quantity	Artifact Types Collected	Comments
P2	2	Bifaces	Five metres apart
P5	1	Biface	

Both findspots contain non-diagnostic Onondaga chert biface tools. Findspot P2, consisting of two biface tools, is situated in the central northern portion of the subject property approximately 44 metres east of the nearest Indigenous site. The isolate biface of Findspot P5 is situated approximately 49 metres east of the nearest Indigenous site.

3.2.2 Sites

With the exception of site AgGt-318, which is an Indigenous site consisting of a lithic scatter of less than ten artifacts, all other Indigenous sites are isolated diagnostic points (see Supplementary Documentation: Figure 1). The artifact assemblages of the Indigenous sites are comprised solely of lithic material.

A full catalogue of material from all Indigenous sites is presented in Appendix B and samples of these artifacts are displayed in Section 8.0 (Images 33-36). Table 4 provides a summary of the approximate size of each site, the number of artifacts collected versus the total number observed in the field, the types of artifacts

collected, and any other relevant comments. For greater accuracy, the site size reflects the maximum length and width, independent of cardinal direction.

Table 4: Summary of Indigenous Sites Documented within the Subject Property

Site	Site Size (Metres)	Artifact Total	Artifact Types Collected	Comments
AgGt-315	-	1 of 1	1 projectile point	Meadowood
AgGt-316	-	1 of 1	1 projectile point	Normanskill
AgGt-317	-	1 of 1	1 projectile point	Brewerton Side-Notched
AgGt-318	25 by 8	9 of 9	5 secondary knapping flakes, 3 flake fragments, 1 primary thinning flake	

Lithic Artifacts

All artifacts encountered on the subject property comprise Onondaga chert.

Lithic Tools

Diagnostic tools were recovered from three sites (AgGt-315, AgGt-316 and AgGt-317).

Site AgGt-317 is a Brewerton Side-Notched projectile point dating to the Middle Archaic period circa 6000-2000 B.C.E. (Ellis et al., 1990) The point measures 31.4 millimetres in length, 27 millimetres in width, and 7.1 millimetres in thickness. It features bilateral notching and has a transverse fracture, exhibits basal and stem grinding, and is missing the upper blade section (tip) (cat. #1; Image 35).

Site AgGt-316 is a Normanskill projectile point dating to the Late Archaic period, circa 2500-1800 B.C.E (Ellis et al., 1990). The robust point measures 65.6 millimetres in length, 32.98 millimetres in width, and 9.9 millimetres in thickness. It features bilateral notching and has damage to one lateral margin (cat. #1; Image 34).

Site AgGt-315 is a Meadowood projectile point dating to the Early Woodland period, circa 1000-500 B.C.E. (Kenyon, 1980; Spence et al., 1990). The point measures 45.3 millimetres in length, 24.4 millimetres in width, and 4.8 millimetres in thickness. It features bilateral notching and is missing one blade barb (cat. #1; Image 33).

4.0 Analysis and Conclusions

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of Land North of Quaker Road, Lot 228, in the former Geographic Township of Thorold, County of Welland, now in the Cities of Welland and Thorold, Regional Municipality of Niagara. The subject property is approximately 40 hectares.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the property. This research indicated there was potential for the presence of Indigenous and Euro-Canadian archaeological resources on the subject property.

The Stage 2 field assessment was conducted on June 30, July 14-15, and August 25, 2021, and on April 27, July 4-7 and 28-29, and August 4-5 and 17-19, 2022 by means of a combined pedestrian and test pit survey in all areas of archaeological potential. During the Stage 2 assessment, two Indigenous findspots, and four Indigenous sites were identified.

4.1 Indigenous Locations

Due to the abundance of water, evidence of pre-contact Indigenous activity within the subject property was considered probable.

The presence of two dispersed, isolated non-diagnostic lithic findspots across the subject property is evidence of past travel through this area for hunting, resource procurement, or loss events on route to other destinations. These findspots represent ephemeral activity and/or casual losses. The dispersed nature of these findspots does not reflect loci of prolonged activity or occupation, and none of these findspots meet the criteria for cultural heritage value or interest outlined in the Standards, Section 2.2, Standard 1 for requiring Stage 3 Archaeological Assessment.

Of the four Indigenous sites, three are isolated diagnostic projectile points: AgGt-315 is a Meadowood projectile point dating to the Early Woodland, AgGt-316 is a Normanskill projectile point dating to the Late Archaic period, and AgGt-317 is a Brewerton Side-Notched projectile point dating to the Middle Archaic period. In accordance with the Standards, Section 2.2, Standard 1, none of these sites meets the criteria for Stage 3 Archaeological Assessment.

The remaining site consists of a non-diagnostic lithic scatter with less than 10 lithic artifacts within a 10-metre by 10-metre pedestrian survey area. In accordance with the Standards, Section 2.2, Standard 1, this site does not meet the criteria for Stage 3 Archaeological Assessment.

5.0 Recommendations

In light of these results, and in accordance with the Ministry of Tourism, Culture and Sport's 2011 *Standards and Guidelines for Consultant Archaeologists,* the following recommendations are made:

1. Given the isolated and non-diagnostic nature of Indigenous Findspots P2 and P5, these locations do not exhibit cultural heritage value or interest and may be considered free of any further archaeological concern.

2. Given the ephemeral and low artifact densities of diagnostic Indigenous sites AgGt-315, AgGt-316 and AgGt-317, these sites do not exhibit cultural heritage value or interest and may be considered free of any further archaeological concern.

3. Given the low artifact density and non-diagnostic nature of Indigenous site AgGt-318, this site does not exhibit cultural heritage value or interest and may be considered free of any further archaeological concern.

4. No further archaeological assessment of the subject property be required.

No grading or other activities that may result in the destruction or disturbance of the archaeological sites documented by this assessment are permitted until notice of the Ministry of Tourism, Culture and Sport's acceptance has been received.

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 Tourism, Culture and Sport 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 Tourism, Culture and Sport concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of the Ministry approval has been received.

6.0 Legislation Compliance Advice

Archaeological Services Inc. advises compliance with the following legislation:

- This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, RSO 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 Tourism, Culture and Sport, 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 sec. 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 Government and 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.

7.0 Bibliography and Sources

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8.0 Images

Image 1: View of conditions in the northwest corner of the subject property.

Image 2: View of conditions within the limits of the Provincially Significant Wetland in the northwest corner of the subject property.

Image 3: View of conditions in the north of the subject property.

Image 4: View of conditions within the limits of the Provincially Significant Wetland in the northwest of the subject property.

Image 5: View of conditions within the limits of the Provincially Significant Wetland in the north-central portion of the subject property.

Image 6: View of conditions, including wetland/marsh vegetation, in the northeast corner of the subject property.

Image 7: View of conditions, including wetland/marsh vegetation, within the limits of the Provincially Significant Wetland in the northeast of the subject property.

Image 8: View of conditions, including wetland/marsh vegetation, in the northwest of the subject property.

Image 9: View of conditions, including wetland/marsh vegetation, within the limits of the Provincially Significant Wetland in the north-central portion of the subject property.

Image 10: View of conditions, including wetland/marsh vegetation, within the limits of the Provincially Significant Wetland in the southeast of the subject property.

Image 11: View of conditions, including wetland/marsh vegetation, within the limits of the Provincially Significant Wetland in the south of the subject property.

Image 12: View of conditions, including wetland/marsh vegetation, within the limits of the Provincially Significant Wetland in the southwest of the subject property.

Image 13: View of wet area covered in marsh grass vegetation in the centre of the ploughed agricultural field.

Image 14: View of overgrown paved gravel driveway/access in the northeast of the subject property.

Image 15: View of artificial berm in the northeast of the subject property.

Image 16: View of former farm complex building remains in the south of the subject property.

Image 17: View of vegetation in the northeast, outside limits of Provincially Significant Wetland; test pit survey in progress.

Image 18: View of woodlot and vegetation in the southwest, outside limits of Provincially Significant Wetland; test pit survey in progress.

Image 19: View of woodlot and vegetation in the south, outside limits of Provincially Significant Wetland; test pit survey in progress.

Image 20: View of woodlot and vegetation in the southeast, outside limits of Provincially Significant Wetland; test pit survey in progress.

Image 21: View of intact soil profile at north end of subject property.

Image 22: View of intact soil profile at south end of subject property.

Image 23: View of disturbed soil profile at north end of subject property.

Image 24: View of disturbed soil profile at south end of subject property.

Image 25: View of disturbed soil profile in the area adjacent to the former farm building complex at south end of subject property.

Image 26: View of conditions across the east side of the ploughed field.

Image 27: View of conditions across the centre of the ploughed field.

Image 28: View of conditions across the west of the ploughed field; pedestrian survey in progress.

Image 29: View of conditions across the west of the ploughed field; pedestrian survey in progress.

Image 30: Lithic artifact from P2.

Image 31: Lithic artifact from P2.

Image 32: Lithic artifact from P5.

Image 33: Lithic artifact from AgGt-315.

Image 34: Lithic artifact from AgGt-316.

Image 35: Lithic artifact from AgGt-317.

Image 36: Sample of lithic artifacts from AgGt-318.

9.0 Maps

See following pages for detailed assessment mapping and figures.

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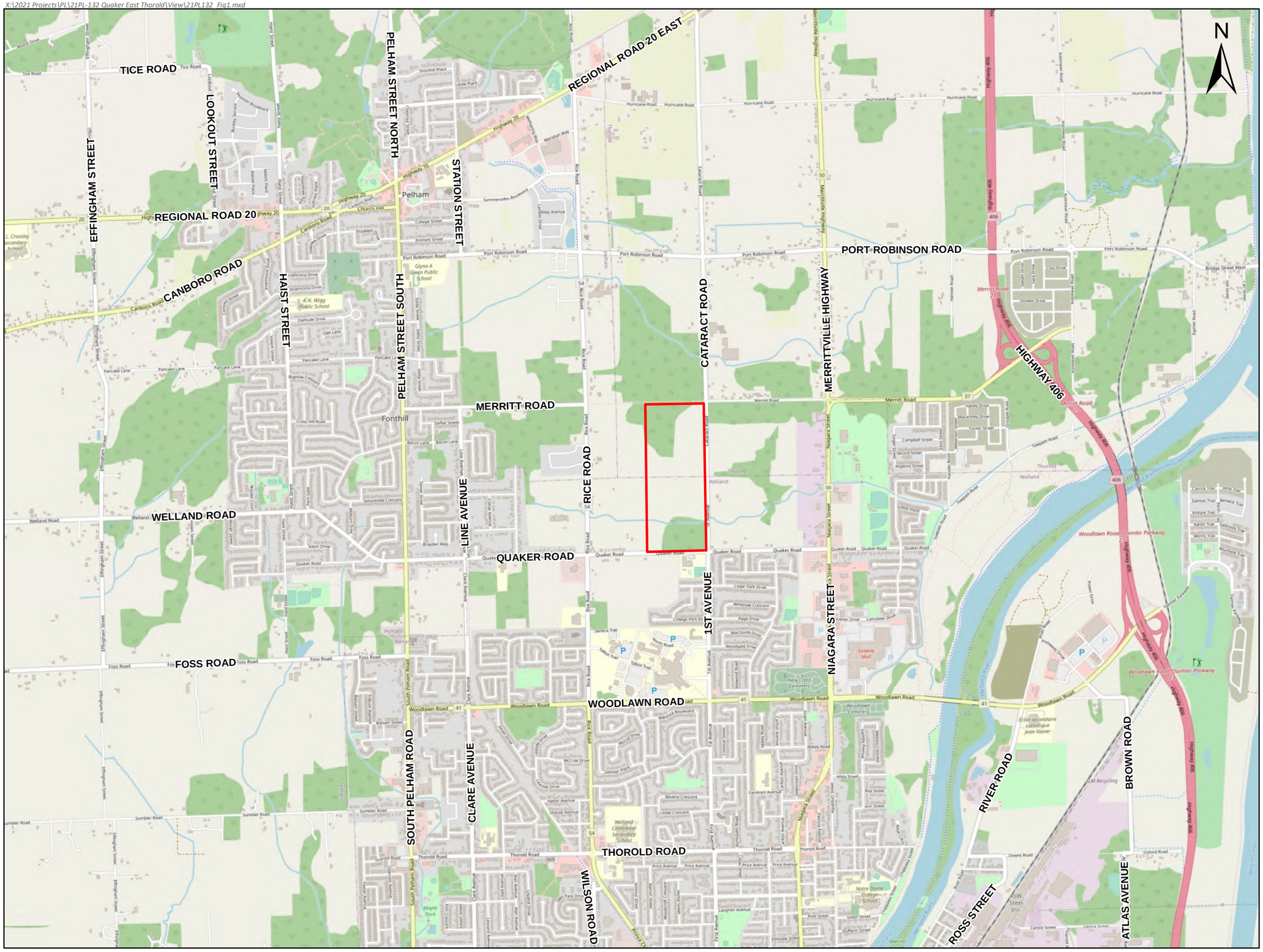

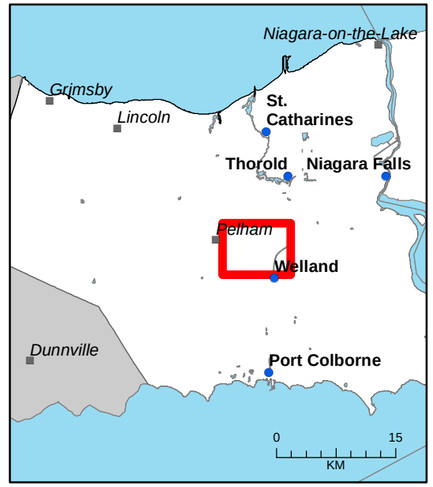

SUBJECT PROPERTY

Sources:
Open Street Map

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DATE: 2021-06-16

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FILE: 21PL132_Fig1

Providing Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
T 416-966-1069 F 416-966-9723 asiheritage.ca

Figure 1: Location of the Subject Property

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Figure 2: Subject Property Located on the 1862 *Tremaine Map of the Counties of Lincoln and Welland*

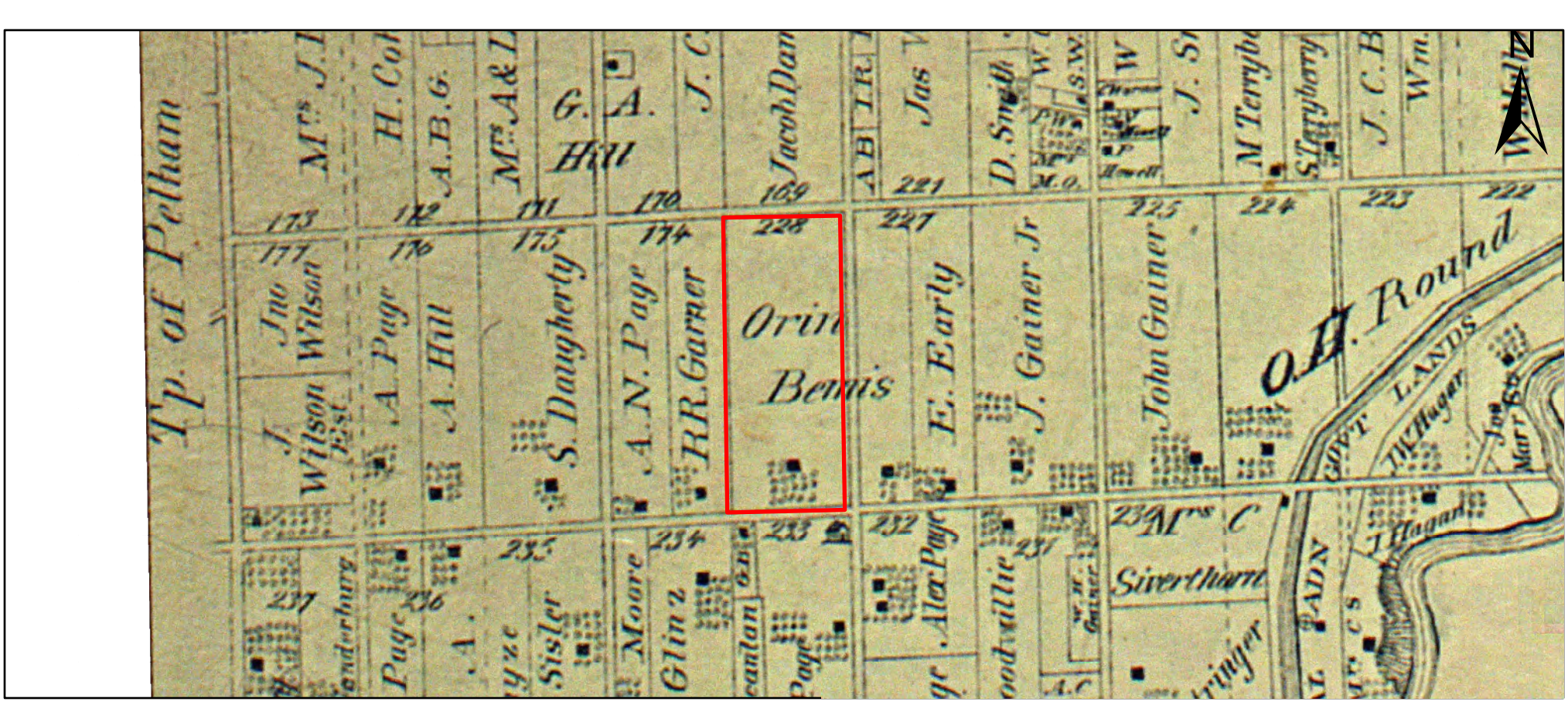

Figure 3: Subject Property Located on the 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland*

Figure 4: Subject Property Located on the 1907 Niagara Topographic Map

ASI

SUBJECT PROPERTY

Sources:
Fig 2: Tremaine Map, Lincoln & Welland (Tremaine & Tremaine, 1862)
Fig 3: Illustrated Historical Atlas, Lincoln & Welland (Page, 1876)
Fig 4: Niagara Sheet (Department of Militia and Defence, 1907)

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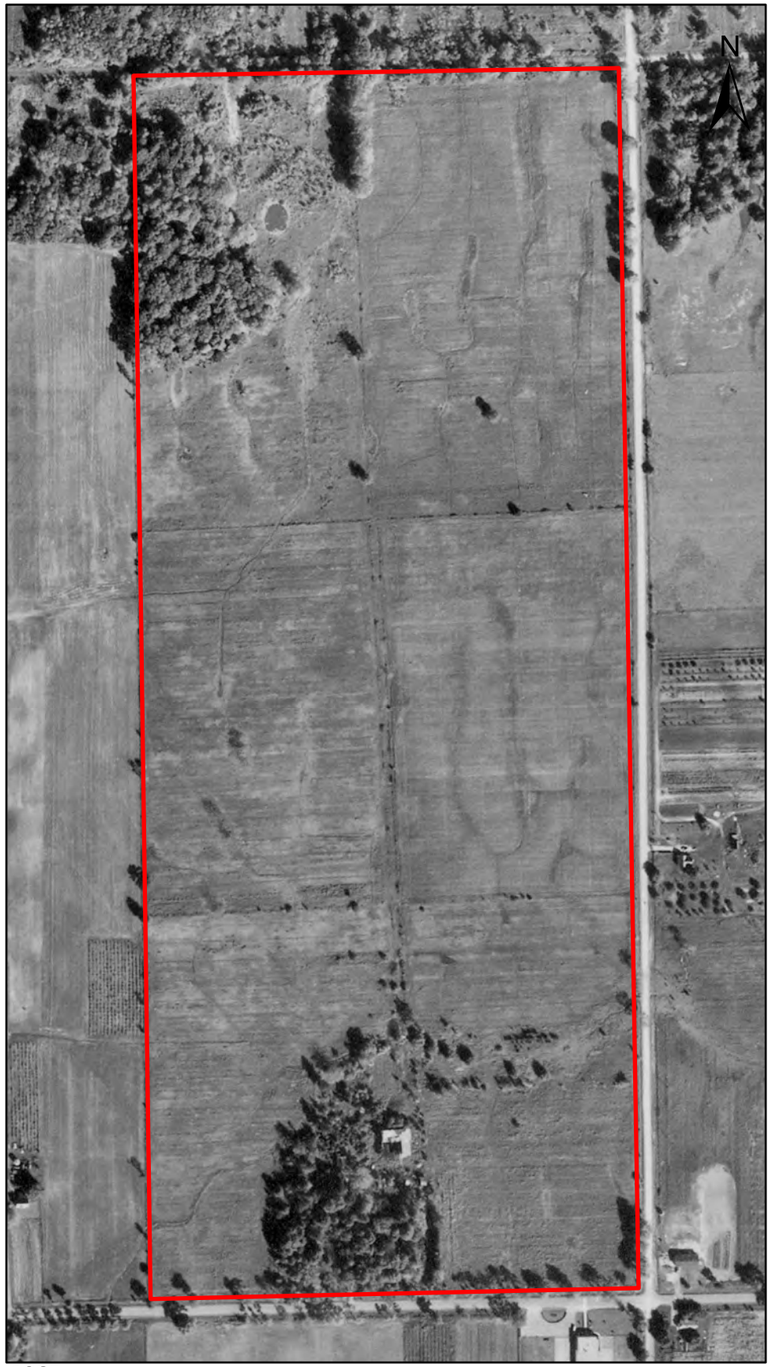
1934



1965

1968

SUBJECT PROPERTY

Source:
Niagara Air Photo Index, Brock University Maps, Data & GIS

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Figure 5: Subject Property Located on 1934, 1965, and 1968 Aerial Imagery

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2002

2010

2018

SUBJECT PROPERTY

Source:
2002 & 2018: Niagara Air Photo Index, Brock University Maps, Data & GIS
2010: Google Earth Pro

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Metres

Projection: NAD 1983 UTM Zone 17N
Scale: 1:4,922
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-132
DATE: 8/29/2022

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FILE: 21PL132_Fig6_landscape

Figure 6: Subject Property Located on 2002, 2010, and 2018 Aerial Imagery

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SUBJECT PROPERTY

WATERCOURSE

Source:
City of Welland, Maxar, Microsoft

0 100
Metres

Projection: NAD 1983 UTM Zone 17N
Scale: 1:2,987
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-132
DATE: 8/29/2022

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FILE: 21PL132_FigX_Existing

Figure 7: Existing Conditions of the Subject Property

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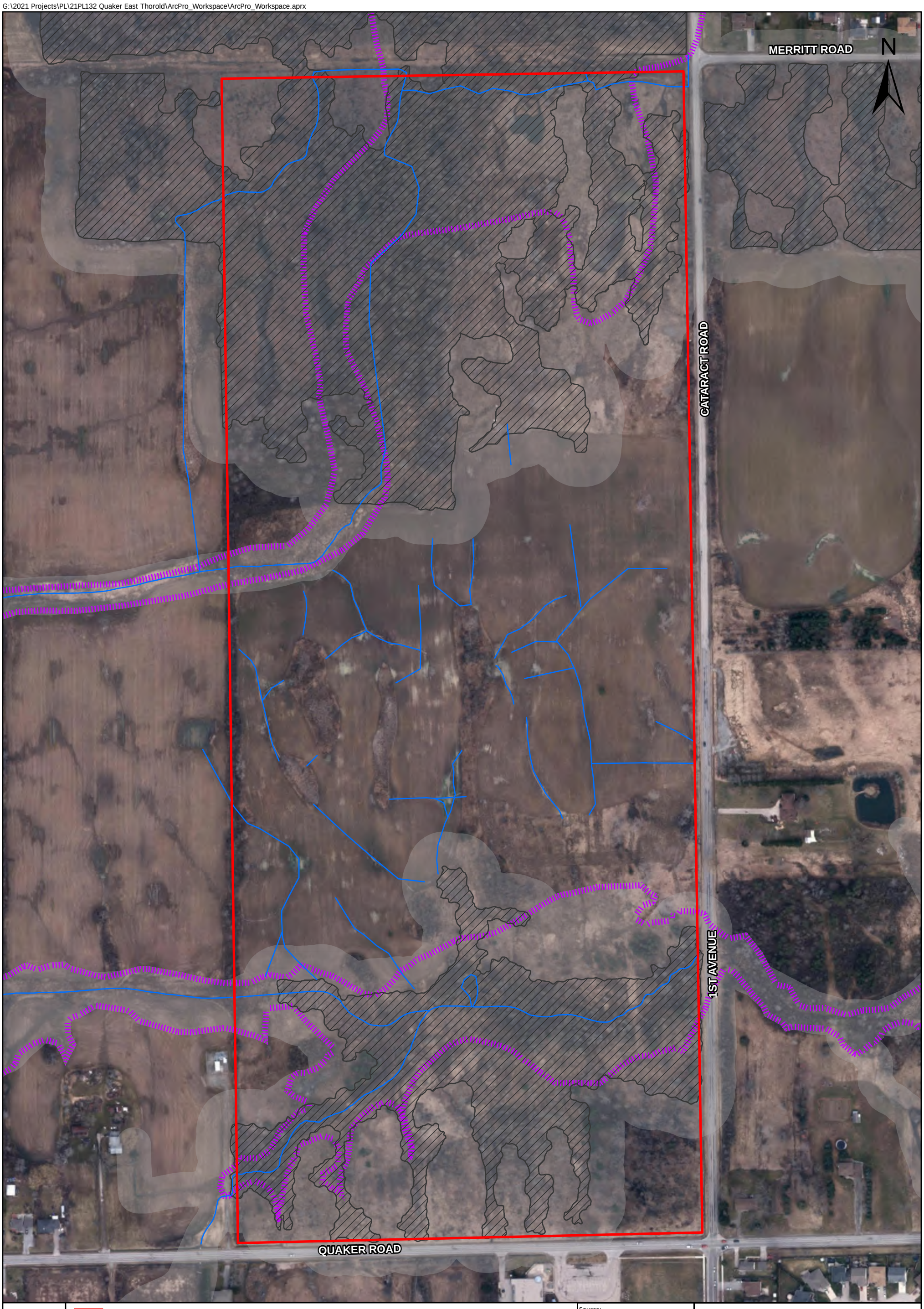

ASI

SUBJECT PROPERTY
PROVINCIALLY SIGNIFICANT WETLAND (NIAGARA PENINSULA CONSERVATION AUTHORITY)
REGULATED FLOODPLAIN (NIAGARA PENINSULA CONSERVATION AUTHORITY)
REGULATION LANDS (NIAGARA PENINSULA CONSERVATION AUTHORITY)
WATERCOURSE

Source:
City of Welland, Maxar, Microsoft.

GEI Consultants, Inc. (Savanta),
2020 Welland Constraints Report
(Figure 2: Landscape Setting).

Projection: NAD 1983 UTM Zone 17N
Scale: 1:2,987
Page Size: 11 x 17

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Metres

ASI PROJECT NO.: 21PL-132
DATE: 8/29/2022

DRAWN BY: jfernandez
FILE: 21PL132_FigX_Existing_PSW_Floodplain

Figure 8: Conservation and Wetland Constraints Limits

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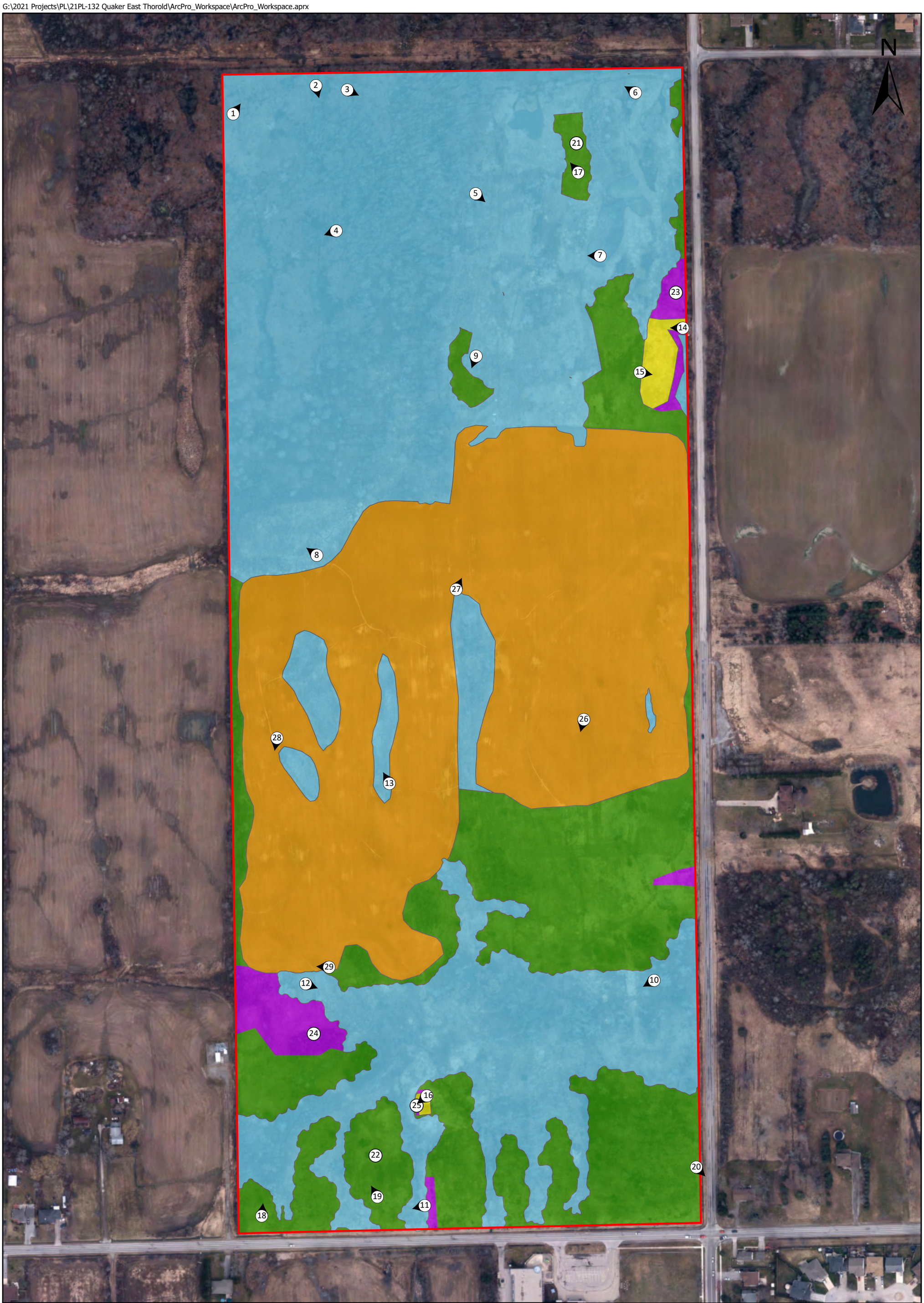

SUBJECT PROPERTY
DISTURBED - NO ARCHAEOLOGICAL POTENTIAL
LOW AND WET - NO ARCHAEOLOGICAL POTENTIAL
PEDESTRIAN SURVEY (5 METRE INTERVALS)
TEST PIT SURVEY (10 METRE INTERVALS) - DISTURBED SOIL PROFILES
TEST PIT SURVEY (5 METRE INTERVALS) - INTACT SOIL PROFILES
PHOTO
TEST PIT PHOTO

City of Welland, Maxar, Microsoft

0 100
Metres

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File: Stg2

Figure 9: Stage 2 Archaeological Assessment Results

Appendix A: Registered Sites Within One Kilometre of the Subject Property

Borden number	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AgGt-203	N/A	Paleo, Hi-Lo	Findspot	Detritus Consulting, 2014; 2015
AgGt-216	N/A	Late Archaic (Crawford Knoll, Normanskill)	Campsite	Detritus Consulting, 2015; 2016
AgGt-217	N/A	Middle Archaic (Brewerton) Late Archaic (Crawford Knoll)	Campsite	Detritus Consulting, 2015; 2016
AgGt-219	P1	Indigenous	Scatter	Detritus Consulting, 2014

Borden number	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AgGt-262	N/A	Paleo (Plano)	Campsite	Detritus Consulting, 2018
AgGt-263	N/A	Indigenous	Unknown	Detritus Consulting, 2018
AgGt-288	Location 1	Early Paleo (Gainey); Early Archaic; Middle Archaic; Woodland; Euro-Canadian	Indigenous Campsite; Euro-Canadian dump	Stantec Consulting, 2020

Appendix B: Indigenous Lithic Artifact Catalogue

Appendix B: Indigenous Lithic Artifact Catalogue

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
P2						
1	1	Surface	Layer 1	Biface	Onondaga Chert	L:58.15 mm W:47.39 mm T:14.33 mm; Unrefined rounded base and lower medial section with transverse fracture.
2	1	Surface	Layer 1	Biface	Onondaga Chert	L:35.04 mm W:16.37 mm T:7.79 mm; Semi-refined lateral margin fragment.
Total : 2 artifacts						
P5						
1	1	Surface	Layer 1	Biface	Onondaga Chert	L:52.57 mm W:39.11 mm T:16.14 mm; Ovate and unrefined.
Total : 1 artifact						
AgGt-315						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Meadowood (Early Woodland Period: 1000 BCE - 500 BCE); L:45.36 mm W:24.47 mm T:4.88 mm; Missing one blade barb.
Total : 1 artifact						
AgGt-316						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Normanskill (Late Archaic Period: 2500 BCE - 1800 BCE); Side-Notching (W 32.98 mm); L:65.68 mm W:32.98 mm T:9.97 mm; Robust; damage to one lateral margin.
Total : 1 artifact						
AgGt-317						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Brewerton Side-Notched (Middle Archaic Period: 6000 BCE - 2000 BCE); L:31.43 mm W:27.07 mm T:7.19 mm; Transverse fracture; missing upper blade section/tip; exhibits basal and stem grinding.
Total : 1 artifact						
AgGt-318						
1	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
2	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
3	1	Surface	Layer 1	Primary Thinning Flake	Onondaga Chert	
4	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
5	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
6	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
7	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
8	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
9	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
Total : 9 artifacts						
Grand Total : 15 artifacts						