

Stage 1-2 Archaeological Assessment, 210, 256 & 276 Quaker Road

Part of Lots 226 and 227
Geographic Township of Thorold,
Historical County of Welland, now the Town of Pelham,
Regional Municipality of Niagara, Ontario

Submitted to:

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and

Ontario's Ministry of Heritage, Sport, Tourism and Culture Industries

Submitted by:



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archaeology · heritage

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ORIGINAL REPORT

November 11, 2021

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Upper Canada Consultants on behalf of Ashton Homes (Western) Ltd. ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Lots 226 and 227 in the Geographic Township of Thorold and historical County of Welland, now the Town of Pelham within the Region of Niagara, Ontario (Figure 1). This investigation was conducted in advance of a proposed housing development on four adjoining properties along Quaker Road on the outskirts of the community of Pelham (the 'Study Area'; Figure 9).

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

The Study Area is roughly square in shape and measures 19.60 hectares ('ha'). As was noted above, it consists of four properties (Figure 7). The large parcel at 210 Quaker Road spans the entire eastern half of the Study Area. The smaller neighbouring properties at 256 and 276 Quaker Road occupy the southwestern corner. The remainder of the western half of the Study Area comprises a large parcel with no municipal address. The small neighbouring properties at 232 and 238 Quaker Road are not included in the development.

The Study Area is bound to the south by Quaker Road; to the west by the large agricultural estates at 294 Quaker Road and 744 First Avenue; and to the north by a woodlot and a large agricultural field. This field, which occupies the southern end of the property situated between 2415 and 2483 Merritt Road, extends into 210 Quaker Road for approximately 76 metres ('m'). The eastern edge of the Study Area is mostly bound by the commercial properties between 975 and 1043 Niagara Street. The residential property at 168 Quaker Road borders the southern end of the eastern side. A seasonal tributary of the western branch of the Welland Canal traverses the Study Area from northeast to southwest.

Just prior to the time of assessment, most of the Study Area was covered by unkempt grass with extensive and often dense wooded areas throughout, in addition to the aforementioned agricultural land in the northeastern corner. The trees throughout the Study Area were removed in 2020. As a result, most of the Study Area was accessible to ploughing, although large stretches of it had not been subject to agriculture since at least the turn of the most recent century. An aerial image from 1934 suggests that less than half of the property was ever cultivated (Figure 3).

The Stage 1 Background Study indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. As such, a Stage 2 Property Survey was recommended.

The Stage 2 field assessment was conducted on July 3, 2021 (Figure 7). The seasonal tributary of the Welland Canal was not accessible ploughing, although it was dry at the time of the current assessment. The tributary bed and its overgrown banks were subject to a typical test pit survey. No cultural material was encountered. The agricultural land and most of the formerly treed areas throughout the remainder of the Study Area, meanwhile, were accessible to ploughing, and so were subject to a typical pedestrian survey.

Four areas were unable to be ploughed, all of which correspond with areas of previous disturbance. The first consisted of the remains of an earlier house, small barn, and series of stone

enclosures surrounded by a hairpin gravel driveway at 256 Quaker Road in southwestern corner of the Study Area. The structures appear in a 2000 aerial image of the Study Area (Figure 4), and seem to replace an earlier house and driveway that are visible in the previous 1934 aerial (Figure 3). By 2010, the buildings and enclosures had been removed leaving the gravel driveway and demolition material (Figure 5). At the time of the current assessment, the area contained within the curving driveway had become overgrown, although the gravel surface of the driveway itself as well as the concrete pads from with the earlier building footprints still remained.

A second unploughed area comprised a large expanse of overgrown gravel along the eastern edge of the Study Area, adjacent to the southern side of the seasonal tributary. This area corresponds with a large transport yard that was once utilised by Tallman Transport. The transport company operated out of neighbouring 1003 Niagara Street for over 50 years before closing its doors in 2013 (Benner 2020). In 2015, Tallman Transport was replaced by BCM Insurance, which remained in business at the time of this report (Henschel 2021).

The gravel transport yard first appears on the aerial image of the Study Area from 2000 (Figure 4). The yard was large, and extended from the seasonal tributary as far south as the residential property at 168 Quaker Road. By 2010, an area to the immediate south of the yard was surrounded by a concrete wall, although the purpose of the enclosed area is not clear (Figure 5). The wall still appears in the 2015 aerial image of the Study Area, after the new insurance building had been erected (Figure 6). A portion of the concrete wall was observed within the Study Area during the current investigation, resulting in the third area that was unable to be ploughed.

The final unploughed portion of the formerly treed lands consisted of an overgrown gravel laneway to the east of the property at 232 Quaker Road. This laneway opens onto Quaker Road and terminates at a round gravel area. It appears on the aerial image from 1934, accessing a house and possible a barn that stood on the property at that time (Figure 3). The structures do not appear in any of the successive aerial images of the Study Area.

All potential areas of previous disturbance were subject to a Stage 2 property inspection. The concrete pads, stretches of stone wall, and all visible gravel surfaces were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources. The overgrown areas surrounding the concrete pads and stone wall sections, as well as any gravel areas that had become overgrown and obscured, were subject to judgemental test pitting wherever possible. All of the test pits within the unploughed areas demonstrated evidence of previous disturbance in the form of compact aggregate fill. No material culture was observed. All areas of previous disturbance were mapped and photo documented.

The pedestrian survey of the remainder of the formerly treed and agricultural land resulted in the documentation of Findspot 1, an isolated secondary flake of Onondaga chert observed adjacent to the northern bank of the Welland Canal tributary, just west of the centre point of the Study Area (Tile 1 of the Supplementary Documentation). No other artifacts were observed. Given the isolated nature of this non-diagnostic pre-contact Aboriginal artifact, Findspot 1 does not meet any of the criteria for a Stage 3 assessment listed in Section 2.2, Standard 1c of the *Standards and Guidelines* (Government of Ontario 2011), and therefore retains no further CHVI. **A Stage 3 archaeological assessment is not recommended for Findspot 1.**

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

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- Mr. William Heikoop, Planner, Upper Canada Planning and Engineering Ltd.
- Mr. Aldo Vercillo, President, Ashton Homes (Western) Ltd.

1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Upper Canada Consultants on behalf of Ashton Homes (Western) Ltd. ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Lots 226 and 227 in the Geographic Township of Thorold and historical County of Welland, now the Town of Pelham within the Region of Niagara, Ontario (Figure 1). This investigation was conducted in advance of a proposed housing development on four adjoining properties along Quaker Road on the outskirts of the community of Pelham (the 'Study Area'; Figure 9).

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

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

- To provide information about the Study Area's geography, history, previous archaeological fieldwork and current land conditions;
- to evaluate in detail, the Study Area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- to recommend appropriate strategies for Stage 2 survey.

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

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

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

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

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

1.2 Historical Context

1.2.1 Post-Contact Aboriginal Land Use

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

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

The late 17th and early 18th centuries represent a turning point in the evolution of the post-contact Aboriginal occupation of Southern Ontario. At this time, various Iroquoian-speaking communities began migrating from New York State, followed by the arrival of new Algonkian-speaking groups from northern Ontario (Konrad 1981; Schmalz 1991). More specifically, this period marks the arrival of the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes. The oral traditions of the Mississaugas, as recounted by Chief Robert Paudash and recorded in 1904, suggest that the Mississaugas defeated the Mohawk Nation, who retreated to their homeland south of Lake Ontario. Following this conflict, a peace treaty was negotiated between the two groups and, at the end of the 17th century, the Mississaugas' settled permanently in Southern Ontario, including the Niagara Peninsula (Praxis Research Associates n.d.). Around this same time, members of the Three Fires Confederacy (Chippewa, Ottawa, and Potawatomi) began immigrating from Ohio and Michigan into southwestern Ontario (Feest and Feest 1978).

The current Study Area falls within the lands surrendered by Treaty Number 3. According to Morris, Treaty Number 3,

...was made with the Mississa[ug]a Indians 7th December, 1792, though purchased as early as 1784. This purchase in 1784 was to procure for that part of the Six Nation Indians coming into Canada a permanent abode. The area included in this Treaty is, Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties; Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County ...

Morris 1943: 17-18

The size and nature of the pre-contact settlements and the subsequent spread and distribution of Aboriginal material culture in Southern Ontario began to shift with the establishment of European settlers. Lands in the Lower Grand River area were surrendered by the Six Nations to

the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township (Page & Co. 1879; Weaver 1978; Tanner 1987). Despite the inevitable encroachment of European settlers on previously established Aboriginal territories, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009: 114). As Ferris observes, despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Land Use

The Study Area is located on Lots 226 and 227 within the Geographic Township of Thorold and historical County of Welland, now the Town of Pelham within the Region of Niagara, Ontario. The history of this area began in 1763, when the Treaty of Paris brought an end to the Seven Years War, contested between the British and the French and their respective allies. Under the Royal Proclamation of 1763, the large stretch of land from Labrador in the east, moving southwest through the Saint Lawrence River Valley to the Great Lakes and on to the confluence of the Ohio and Mississippi Rivers became the British Province of Québec (Niagara Historical Society and Museum 2008).

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

In July 1792, Simcoe divided Upper Canada into 19 counties stretching from Essex in the west to Glengarry in the east. Each new county was named after a county in England or Scotland; the constituent townships were then given the names of the corresponding townships from each original British county (Powell and Coffman 1956). Later that year, the four districts originally established in 1788 were renamed the Western, Home, Midland, and Eastern Districts. As population levels in Upper Canada increased, smaller and more manageable administrative bodies were needed resulting in the establishment of many new counties and townships. As part of this realignment, the boundaries of the Home and Western Districts were shifted and the London and Niagara Districts were established. Under this new territorial arrangement, the Study Area became part of the Niagara District (Archives of Ontario 2012-2015).

In 1845, after years of increasing settlement that began after the War of 1812, the southern portion of Lincoln County was severed to form Welland County; the two counties would be amalgamated once again in 1970 to form the Regional Municipality of Niagara.

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

The Study Area spans portions of Township Lots 226 and 227. More specifically, the property at 210 Quaker Street occupies the southwestern corner of Lot 226. All of this lot was owned by J. Garner Jr., presumably the son of John Garner, owner of neighbouring Lot 225. A house and two orchards are depicted on Garner Jr.'s property within the limits of the current Study Area. The remaining constituent properties within the Study Area occupied the southeastern corner of Lot 227, within a parcel owned by E. Early. A house and an orchard are illustrated in the

southwestern corner of Early's property, within the limits of what are now 256 and 276 Quaker Street.

The Welland Canal traverses Lots 222 to 224 to the east of the Study Area. Looking farther afield, the early communities of Port Robinson and Allanburgh are visible to the northeast, linked by a branch of the Welland Railroad. Although significant and detailed landowner information is available on the current *Historical Atlas*, it should be recognized that historical county atlases were funded by subscription fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston 1997). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area is roughly square in shape and measures 19.60 hectares ('ha'). It consists of four adjoining properties (Figure 7). The large parcel at 210 Quaker Road spans the entire eastern half of the Study Area. The smaller neighbouring properties at 256 and 276 Quaker Road occupy the southwestern corner. The remainder of the western half of the Study Area comprises a large parcel with no municipal address. The small neighbouring properties at 232 and 238 Quaker Road are not included in the development.

The Study Area is bound to the south by Quaker Road; to the west by the large agricultural estates at 294 Quaker Road and 744 First Avenue; and to the north by a woodlot and a large agricultural field. This field, which occupies the southern end of the property situated between 2415 and 2483 Merritt Road, extends into 210 Quaker Road for approximately 76 metres ('m'). The eastern side of the Study Area is mostly bound by the commercial properties between 975 and 1043 Niagara Street. The residential property at 168 Quaker Road borders the southern end of the eastern side. A seasonal tributary of the western branch of the Welland Canal crosses the Study Area from northeast to southwest.

Just prior to the time of assessment, most of the Study Area was covered by unkempt grass with extensive and often dense wooded areas throughout, in addition to the aforementioned agricultural land in the northeastern corner. The trees throughout the Study Area were removed in 2020.

Prior to the urban development of the City of Welland and the satellite communities of Pelham and Fonthill, the majority of the region surrounding the Study Area had been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the early 19th century. Much of the region today continues to be used for agricultural purposes.

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

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

Chapman and Putnam 1984: 156

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

The closest source of potable water is a seasonal tributary of the Welland Canals, which spans the Study Area from northeast to southwest. The Welland River is located approximately 1.5 kilometres ('km') to the southeast.

1.3.2 Pre-Contact Aboriginal Land Use

The Study Area occupies a portion of southern Ontario has been occupied as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, Aboriginal communities were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Thorold Township prior to the arrival of European settlers (Ellis and Ferris 1990).

Table 1: Cultural Chronology for Thorold Township

Time Period	Cultural Period	Comments
9500 – 7000 BC	Paleo Indian	first human occupation hunters of caribou and other extinct Pleistocene game nomadic, small band society
7500 - 1000 BC	Archaic	ceremonial burials increasing trade network hunter gatherers
1000 - 400 BC	Early Woodland	large and small camps spring congregation/fall dispersal introduction of pottery
400 BC – AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade network
AD 800 - 1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300 - 1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large palisaded villages
AD 1400 - 1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Registered Archaeological Sites

In order to compile an inventory of known archaeological resources in the vicinity of the Study Area, Detritus consulted the ASDB. The ASDB, which is maintained by the MHSTCI (Government of Ontario n.d.), contains information concerning archaeological sites that have been registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13km east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area lies within block AgGt.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MHSTCI will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

According to the ASDB, a single archaeological site has been registered within 1km of the Study Area (Table 2).

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

Borden #	Site Name	Time Period	Affinity	Type
AgGt-83	Round	Post Contact	Euro-Canadian	homestead

Round (AgGt-83) is a Euro-Canadian homestead documented during a Stage 1-2 assessment conducted by Archaeological Research Associates Ltd ('ARA') to the north of Quaker Road and to the west of Towpath Road (ARA 1994; CIF# 1994-036). This investigation was completed in 1994 in advance of the Towpath Village housing development. The site comprised 52 Euro-Canadian artifacts spanning an area of 30m by 80m on a slight knoll located approximately 250m to the

south of a small stream that flowed into the Welland River. The river itself was located approximately 800m to the southeast. The site also featured exposed house foundations and the demolished structural remains of a house, barn, two outbuildings, a well, and a cistern.

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

1.3.4 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Detritus applied archaeological potential criteria commonly used by the MHSTCI to determine areas of archaeological potential within Study Area. According to Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011), these variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, when considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site locations and types to varying degrees. As per Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario 2011), water sources may be categorized in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- secondary water sources: intermittent streams and creeks, springs, marshes and swamps;
- past water sources, glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The closest source of potable water is a seasonal tributary of the Welland Canal, which traverses the Study Area from northeast to southwest. The Welland River is located approximately 1.5km to the southeast.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The Study Area is situated within the Haldimand Clay Plain Physiographic Region. As was discussed earlier, the soils within this region drain well making them suitable for pre-contact and post contact Aboriginal agricultural. Considering also the length of occupation of Thorold Township prior to the arrival of Euro-Canadian settlers, the pre-contact and post-contact Aboriginal archaeological potential of the Study Area is judged to be moderate to high.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990b) or property that local histories or informants have identified with possible historical events.

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

The Study Area spans portions of Township Lots 226 and 227. The eastern half, corresponding with 210 Quaker Road, was owned by J. Garner Jr. as of 1876. A house and two orchards are depicted on Garner Jr.'s property within the limits of the Study Area. The western half was owned by E. Early. A house and an orchard are illustrated in the southwestern corner of Early's property,

within the limits of what is now 256 and 276 Quaker Street. The Welland Canal traverses Lots 222 to 224 to the east of the Study Area. The early communities of Port Robinson and Allanburgh are visible to the northeast, linked by a branch of the Welland Railroad. Considering also the presence of a Euro-Canadian homestead registered within 1km of the Study Area, the Euro-Canadian archaeological potential of the Study Area is judged to be moderate to high.

Additionally, the *Town of Pelham Cultural Heritage Master Plan* (BRAY Heritage 2012) was consulted and indicates the entire Study Area contains archaeological potential.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as per Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario 2011). Recent aerial imagery of the region revealed a number of potential areas of previous disturbance within the limits of the Study Area.

The first includes a house, small barn, and series of stone enclosures that once occupied the property at 256 Quaker Road, surrounded by a hairpin gravel driveway. The structures appear in a 2000 aerial image of the Study Area (Figure 4), and seem to replace an earlier house that is visible in the previous 1934 aerial (Figure 3). By 2010, the buildings and enclosures had been removed leaving the gravel driveway and demolition material (Figure 5).

A second area of possible disturbance comprises a large gravel transport yard utilised by Tallman Transport along the eastern edge of the Study Area, adjacent to the southern side of the Welland Canal tributary. Tallman Transport operated out of neighbouring 1003 Niagara Street for over 50 years before closing its doors 2013 (Benner 2020). In 2015, it was replaced by BCM Insurance, which remained in business at the time of this report (Henschel 2021).

The transport yard first appears on the aerial image of the Study Area from 2000 (Figure 4), extending as far south as the residential property at 168 Quaker Road. By 2010, an area to the immediate south of the yard was surrounded by a concrete wall, although the purpose of the enclosed area is not clear (Figure 5). The wall still appears in the 2015 aerial image of the Study Area, after the new insurance building had been erected at 1003 Niagara Street (Figure 6).

The final area possible disturbance consists of a gravel laneway to the immediate east of the property at 232 Quaker Road. This laneway appears on the aerial from 1934, accessing a house and possible a barn that stood on the property at that time (Figure 3). The structures do not appear in any of the successive aerial images.

As per Section 2.1.8, Standard 1 of the *Standards and Guidelines* (Government of Ontario 2011), it is recommended that these areas be subject to a Stage 2 property inspection, conducted according to Section 1.2 of the *Standards and Guidelines* (Government of Ontario 2011) to confirm and document any areas of previous disturbance.

2.0 Field Methods

The Stage 2 archaeological assessment of the current Study Area was conducted on July 3, 2018 under archaeological consulting license P017, issued to Mr. Garth Grimes by the MHSTCI. The southern limits of the Study Area were determined by the Quaker Road right of way and the property fences surrounding 232 and 238 Quaker Road. Limits of the Study Area on all other sides corresponded with the limits of the ploughed area (see below), often bordered by tree lines.

The weather during the Stage 2 fieldwork was sunny with a high of 28°C. Assessment conditions were excellent and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1 to 20 demonstrate the land conditions at the time of the survey throughout the Study Area including areas that met the requirements for a Stage 2 archaeological assessment, as per Section 7.8.6, Standards 1a and b of the *Standards and Guidelines* (Government of Ontario 2011). Figure 7 illustrates the Stage 2 assessment methods, including all photograph locations and directions; Figure 8 illustrates the Stage 2 assessment methods in relation to the development of the Study Area.

Most of the Study Area consisted of formerly treed areas and a portion of an agricultural field in the northeastern corner. As was noted previously, the trees were removed in 2020. As a result, 60% of the Study Area was accessible to ploughing at the time of the assessment, although large stretches of it had not been subject to agriculture since at least the turn of the most recent century. The aerial from 1934 suggests that less than half of the Study Area was ever cultivated (Figure 3).

These areas were ploughed and allowed to weather prior to the pedestrian survey, as per Section 2.1.1, Standards 2 and 3 of the *Standards and Guidelines* (Government of Ontario 2011). The ploughing was deep enough to provide total topsoil exposure, and provided a minimum of 80% surface visibility as per Section 2.1.1, Standards 4 and 5 of the *Standards and Guidelines* (Government of Ontario 2011; Photos 1, 4-5, 7-8, 16-20). The ploughed land was subject to pedestrian survey at a 5m interval in accordance with Section 2.1.1, Standard 6 of the *Standards and Guidelines* (Government of Ontario 2011; Photos 4, 7-8, 16, 19). During the pedestrian survey, when archaeological resources were recovered, survey intervals were intensified to 1m within a 20m radius of the find as per Section 2.1.1 Standard 7 of the *Standards and Guidelines* (Government of Ontario 2011). This approach was taken to establish whether or not the artifact was an isolated find or part of a larger artifact scatter.

The pedestrian survey resulted in the documentation of a single piece of pre-contact Aboriginal chipping detritus, observed just west of the centre point of the Study Area (Tile 1 of the Supplementary Documentation). The artifact was recorded as Findspot 1, and was collected for laboratory analysis and description, as per Section 2.1.1, Standard 8 of the *Standards and Guidelines* (Government of Ontario 2011). A reading was taken for the artifact findspot location, in addition to two fixed reference landmarks as per Section 2.1, Standard 4 and Section 5.0, Standard 2a of the *Standards and Guidelines* (Government of Ontario 2011).

All coordinates recorded during the Stage 2 assessment were taken using a Garmin eTrex 10 GPS unit with a minimum accuracy 1-2.5m (North American Datum 1983 ('NAD83') and Universal Transverse Mercator ('UTM') Zone 17T) and are presented in the Supplementary Documentation to this report.

Approximately 10% of the Study Area comprised the seasonal tributary of the Welland Canal, which was not accessible to ploughing although it was dry at the time of the current assessment. The tributary bed and its overgrown banks were subject to a standard test pit survey, conducted at 5m intervals in accordance with Section 2.1.2, Standards 1 and 2 of the *Standards and Guidelines* (Government of Ontario 2011; Photos 6 & 15). Each test pit was at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil as per Section 2.1.2, Standards 5 and 6 of the *Standards and Guidelines* (Government of Ontario 2011). The soils were examined for stratigraphy, cultural features, or evidence of fill.

All soil was screened through six-millimetre mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit as per Section 2.1.2, Standards 7 and 9 of the

Standards and Guidelines (Government of Ontario 2011). No material culture was encountered during the test pit survey; therefore, no additional assessment methods were employed.

The remaining 30% of the Study Area comprised the possible disturbance areas identified on the current aerial imagery of the Study Area (see Section 1.3.4 above). Although very overgrown, these potential disturbance areas were easily identified in the field as four areas that were unable to be ploughed.

The first consisted of the remains of the and earlier house, small barn, and series of stone enclosures surrounded by a hairpin gravel driveway at 256 Quaker Road in southwestern corner of the Study Area. At the time of the property inspection, the area contained within the curving driveway had become overgrown, although the gravel surface of the driveway itself and the concrete pads corresponding with the earlier building footprints still remained (Photos 2 & 3).

The second area of possible disturbance comprised a large expanse of overgrown gravel along the eastern edge of the Study Area, adjacent to the southern side of the seasonal tributary (Photos 9-11). As was noted earlier, this area corresponds with the large transport yard that was once utilised by Tallman Transport. The third included a portion of the concrete wall that enclosed the area to the south of the gravel yard by 2010 (Photos 13-14). The final area of possible disturbance consisted of the overgrown gravel laneway to the immediate east of the property at 232 Quaker Road (Photo 12).

All potential areas of previous disturbance were subject to a Stage 2 property inspection conducted according to Section 2.1.8, Standard 2 of the *Standard and Guidelines* (Government of Ontario 2011). Based on the results of this inspection, the concrete pads, stretches of stone wall, and all visible gravel surfaces were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario 2011). The overgrown areas between and immediately adjacent to the concrete pads and stone wall sections, as well as any gravel areas that had become overgrown and obscured, were subject to judgemental test pitting wherever possible as per Section 2.1.8, Standard 2 of the *Standard and Guidelines* (Government of Ontario 2011). All of the test pits within the unploughed areas demonstrated evidence of previous disturbance in the form of compact aggregate fill. No material culture was observed.

All of the disturbed areas documented within the Study Area were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario 2011).

3.0 Record of Finds

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 and resulted in the identification of a single pre-contact Aboriginal findspot, identified as Findspot 1. An inventory of the documentary record generated by fieldwork is provided in Table 3 below. Maps indicating the exact findspot location and all UTM coordinates recorded during the assessment are included in the Supplementary Documentation to this report. A description of the Findspot and the recovered artifact are provided in Sections 3.1.

Table 3: Inventory of Document Record

Document Type	Current Location	Additional Comments
1 page of field notes	Detritus office	stored digitally in project file
1 map provided by the Proponent	Detritus office	stored digitally in project file
1 field map	Detritus office	stored digitally in project file
86 digital photographs	Detritus office	stored digitally in project file

The artifact collected during the Stage 2 survey is contained in one box and will be temporarily housed in Detritus' offices until formal arrangements can be made for its transfer to Her Majesty the Queen in right of the Province of Ontario or another suitable public institution acceptable to the MHSTCI and the Study Area's owners.

3.1 Findspot 1

The Stage 2 assessment of Findspot 1 resulted in the documentation of a single piece of pre-contact Aboriginal chipping detritus manufactured from Onondaga chert. The chert type identification was accomplished visually using reference materials located online or in personal collections.

Onondaga chert is a dense non-porous rock that derives from the Middle Devonian age, with outcrops occurring along the north shore of Lake Erie between Long Point and the Niagara River. It typically occurs in nodules or irregular thin beds, and may appear light to dark grey, bluish grey, brown, or black; it can also be mottled with a dull to vitreous or waxy lustre. Onondaga chert is often found at archaeological sites in southern Ontario, and is commonly recognised as a high-quality raw material that was frequently utilized by pre-contact Aboriginal people (Eley and von Bitter 1989).

The chert flake from Findspot 1 was also subject to morphological analysis following the classification scheme described by Lennox, Dodd and Murphy for the Wiacek Site (Lennox *et al.* 1986:79-81) and expanded upon by Fisher for the Adder Orchard site (Fisher 1997: 41-49). According to this system, primary and secondary flakes, along with cortical removal flakes, are a product of percussion flaking undertaken during the initial reduction phases of raw material into blanks, bifaces and preforms. These early-stage reduction flakes tend to exhibit minimal dorsal flake scarring, and are often characterized by the presence of cortex, or the original unflaked chert exterior, on their dorsal surfaces and proximal ends. For cortical removal flakes, over half of the dorsal surface comprises cortex; for primary flakes, less than half. Secondary flakes, meanwhile, may not contain any cortex. Thinning flakes are produced during the latter stages of lithic reduction, when blanks, bifaces, and preforms are shaped into projectile points and formal tools. They are the result of pressure flaking, where the maker uses a softer material such as antler, wood or bone to apply direct pressure onto a specific part of the tool. Pressure flaking generally produces smaller, thinner flakes than does percussion flaking. Thinning flakes also exhibit more flake scars on their dorsal surface than do primary or secondary flakes.

The specimen recovered from Findspot 1 was identified as a secondary flake.

3.3.1 Location 1 Artifact Catalogue

Table 4 provides a catalogue of the Stage 2 artifact assemblage from Location 1. A sample of artifacts are depicted in Section 9.2 of this report.

Table 4: Location 1 Artifact Catalogue

Cat #	Artifact	Frequency	Morphology	Chert Type
1	chipping detritus	1	secondary	Onondaga

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment in advance of proposed housing development on four adjoining properties along Quaker Road on the outskirts of the community of Pelham. The large parcel at 210 Quaker Road spans the entire eastern half of the Study Area. The smaller neighbouring properties at 256 and 276 Quaker Road occupy the southwestern corner. The remainder of the western half of the Study Area comprises a large parcel with no municipal address.

The Stage 1 background research indicated the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. As such, a Stage 2 property assessment was recommended for the formerly treed areas that covered most of the development lands; the agricultural land in the northeastern corner; and the portion of the seasonal tributary of the Welland Canal that traverses the Study Area from northeast to southwest.

Most of the formerly treed land throughout the Study Area was accessible to ploughing. Four discrete areas were unable to be ploughed, all of which corresponded with areas of previous disturbance. The first consisted of the remains of an earlier house, small barn, and series of stone enclosures surrounded by a gravel driveway at 256 Quaker Road in southwestern corner of the Study Area. The second comprised a large, overgrown gravel surface along the eastern edge of the Study Area that was once utilised as a transport yard by Tallman Transport. The third consisted of the remains of the concrete enclosure wall that was added to the south of this yard in 2010. The final area of previous disturbance consisted of an overgrown gravel laneway, to the immediate east of the property at 232 Quaker Road.

Based on the results of a Stage 2 property inspection, the concrete pads of the former structures, the extant stretches of stone wall, and all visible gravel surfaces were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources. The overgrown areas between and immediately adjacent to the concrete pads and stone wall sections, as well as any gravel areas that had become overgrown and obscured, were subject to judgemental test pitting wherever possible. All of the test pits within the unploughed areas demonstrated evidence of previous disturbance in the form of compact aggregate fill.

The Stage 2 field assessment of the Study Area was conducted on July 3, 2021, and consisted of a pedestrian survey of the agricultural land and undisturbed portions of the formerly treed areas, all of which were accessible to ploughing. The seasonal tributary of the Welland Canal, meanwhile, was not accessible to ploughing although it was dry at the time of the current assessment. The tributary bed and its overgrown banks were subject to a typical test pit.

No cultural material was encountered during the test pit assessment. The pedestrian survey, however, resulted in the documentation of Findspot 1, a single isolated secondary flake of Onondaga chert located adjacent to the northern bank of the seasonal tributary, just west of the centre point of the Study Area. No additional cultural material was observed within the Study Area. Given then the isolated nature of the artifact, it is impossible to assign a date or a function for Findspot 1.

5.0 Recommendations

Given the isolated nature of the non-diagnostic artifact, Findspot 1 does not fulfill any of the criteria for a Stage 3 archaeological investigation as per Section 2.2 of the *Standards and Guidelines* (Government of Ontario 2011). **Findspot 1 is not recommended for additional assessment.**

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c. 18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

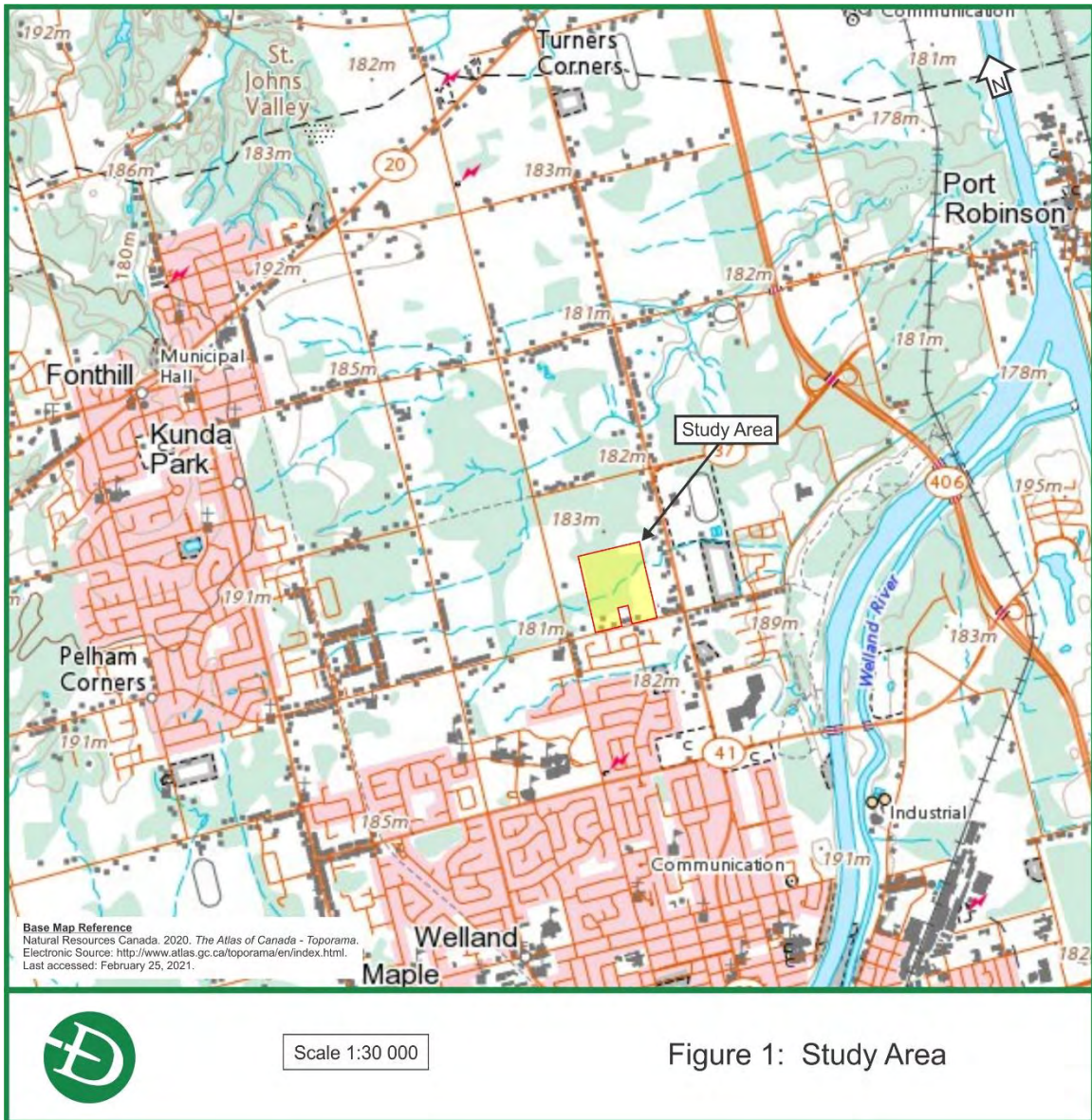
7.0 Bibliography and Sources

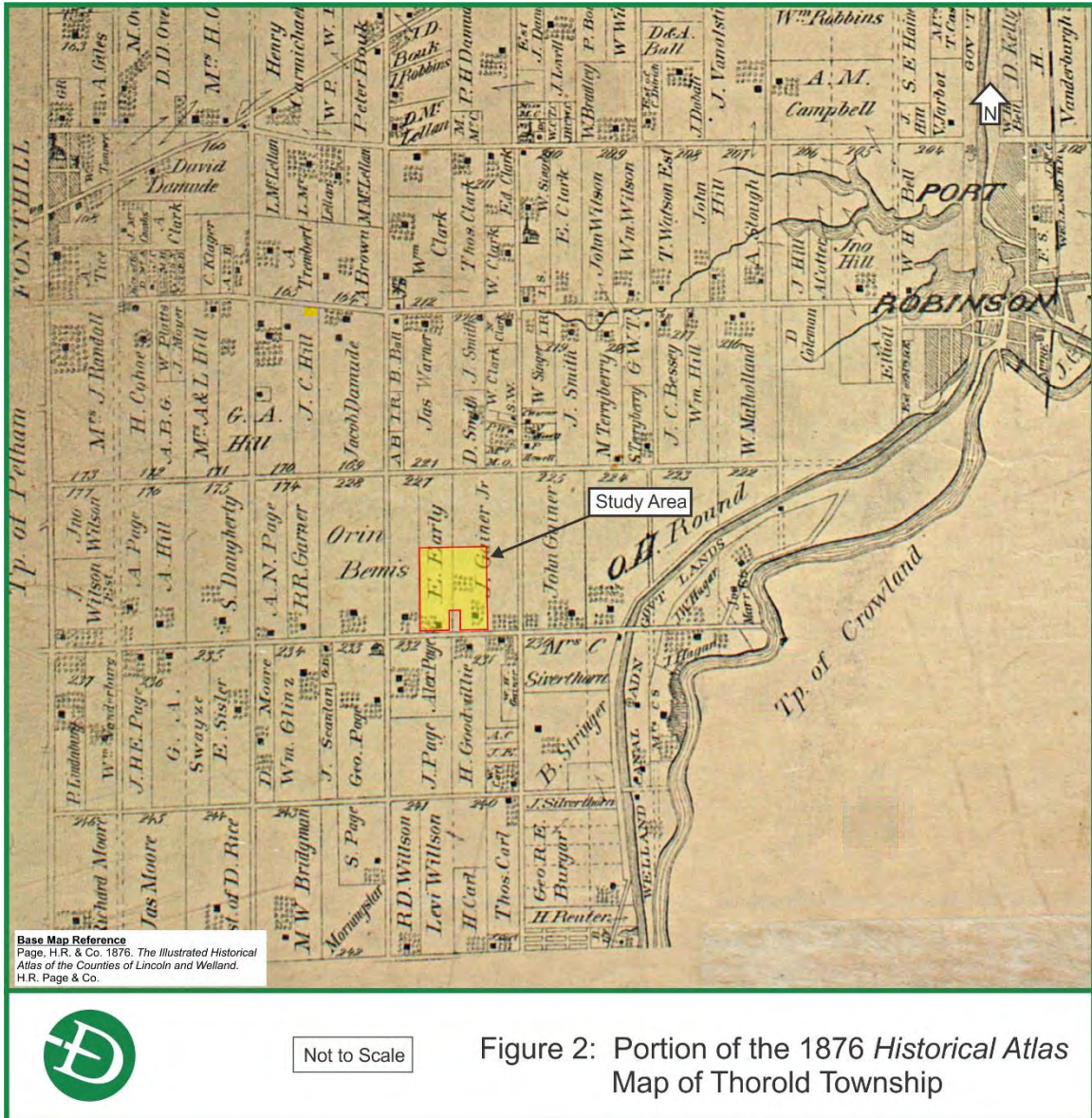
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8.0 Maps





Not to Scale

Figure 2: Portion of the 1876 *Historical Atlas* Map of Thorold Township

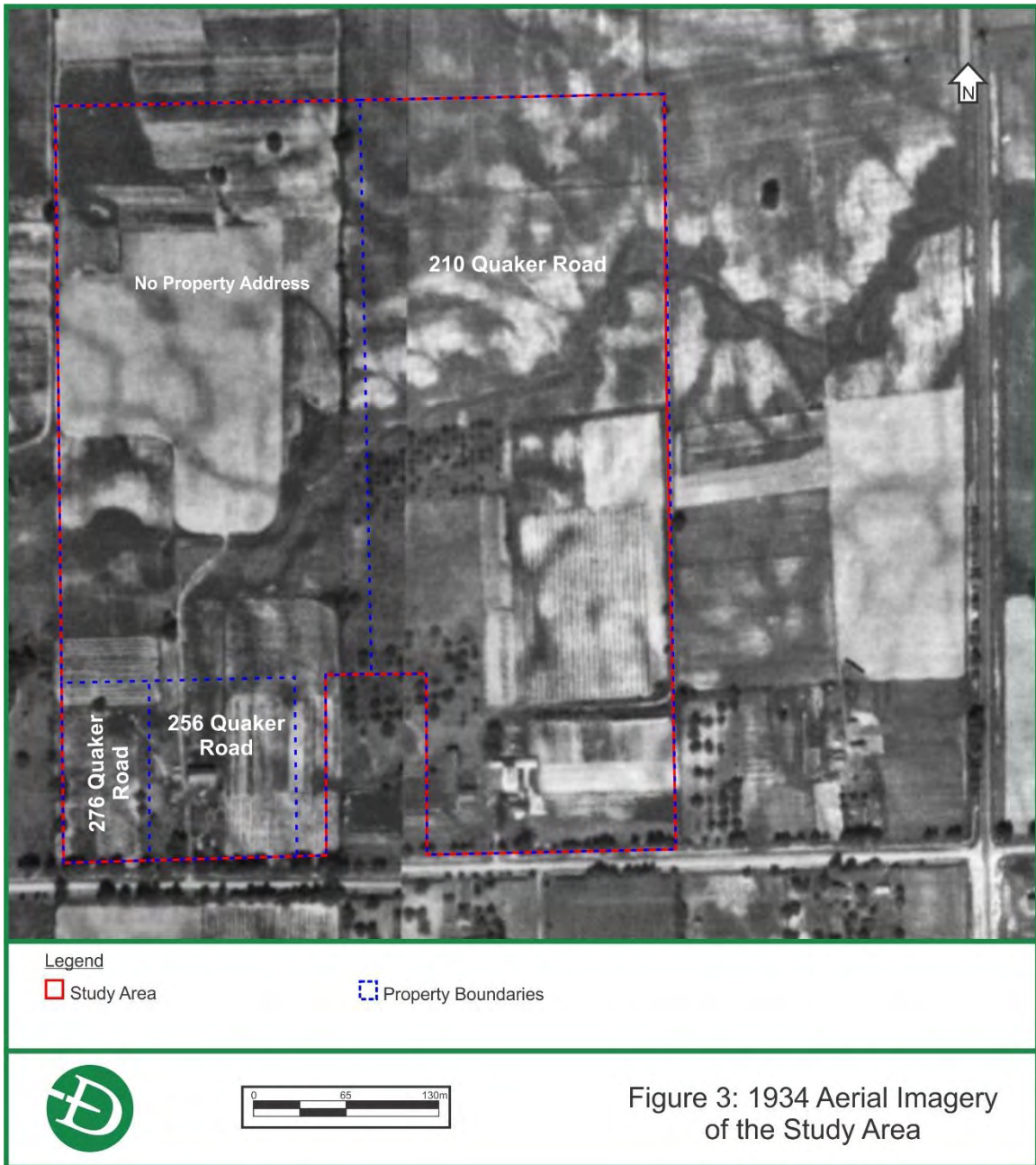




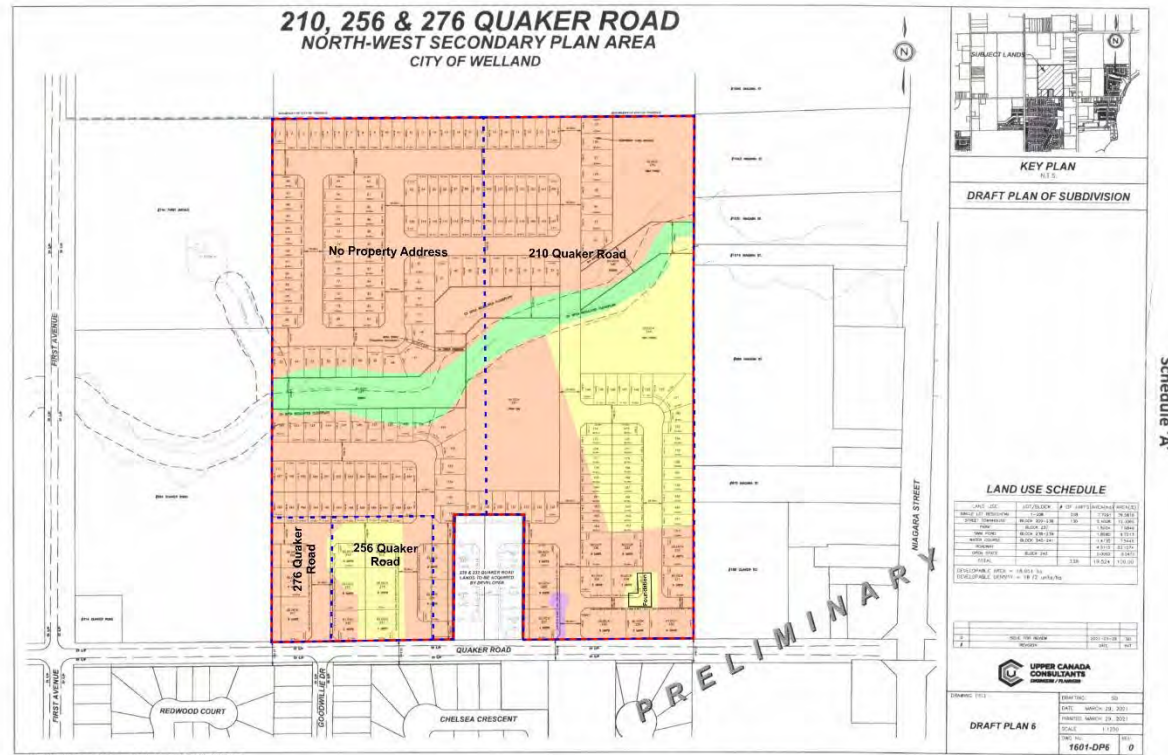
Figure 4: 2000 Aerial Imagery of the Study Area







Stage 1-2 Archaeological Assessment, 210, 256 & 276 Quaker Road, Pelham



Legend

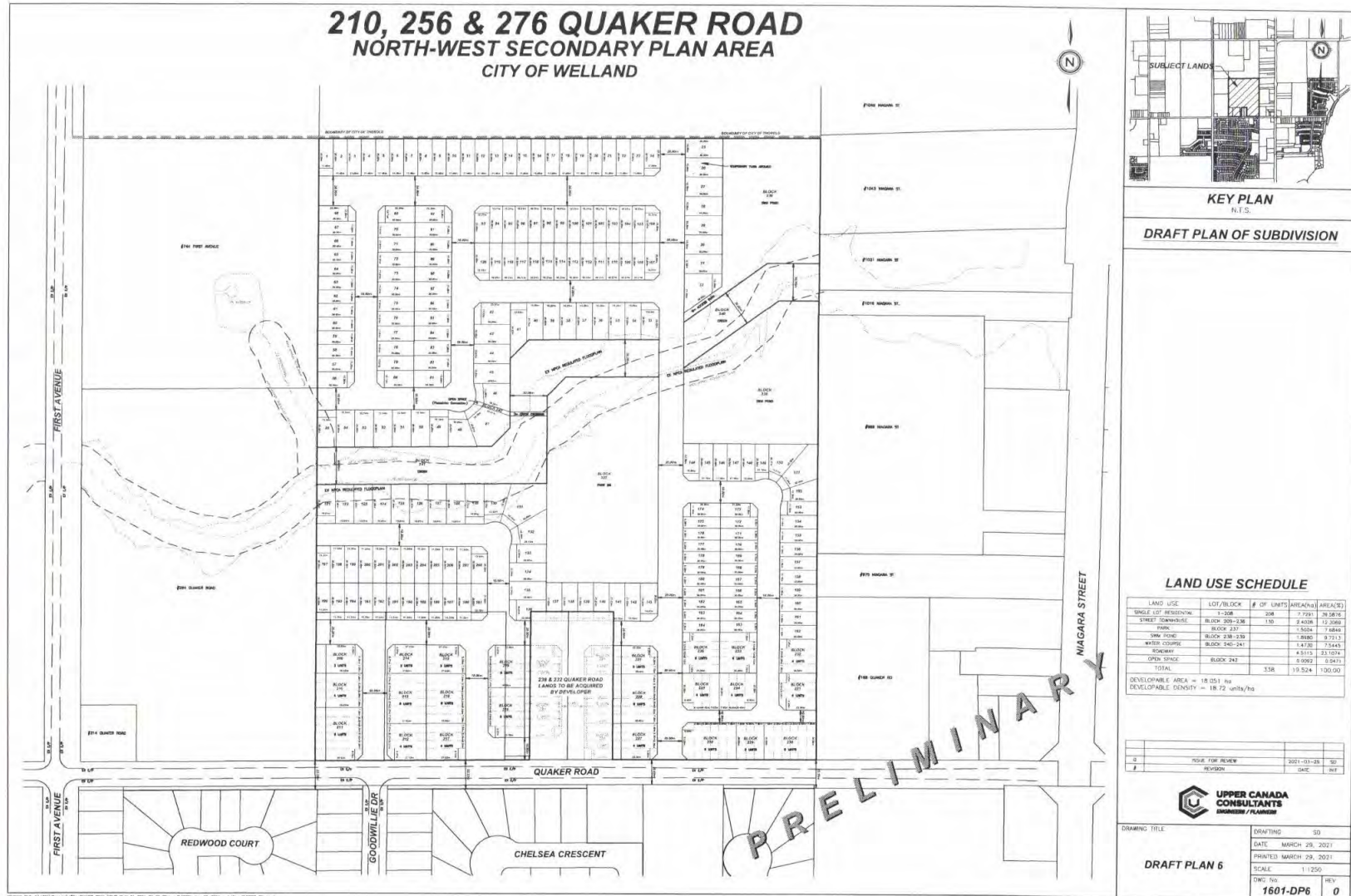
- Property Boundaries
- Study Area
- Photo Location and Direction
- Test Pit Survey at 5m Intervals
- Pedestrian Survey at 5m Intervals
- Previously Disturbed, Not Assessed
- Judgemental Test Pit Survey



Figure 8: Stage 2 Survey Methods in Relation to the Development of the Study Area

Stage 1-2 Archaeological Assessment, 210, 256 & 276 Quaker Road, Pelham

Figure 9: Development Map



9.0 Images

9.1 Photos

Photo 1: Pedestrian Survey at 5m Intervals, looking west



Photo 2: Test Pit Survey at 5m Intervals, looking northwest



Photo 3: Test Pit Survey at 5m Intervals, looking southeast



Photo 4: Pedestrian Survey at 5m Intervals, looking north



Photo 5: Pedestrian Survey at 5m Intervals, looking east



Photo 6: Test Pit Survey, looking west



Photo 7: Pedestrian Survey at 5m Intervals, looking northwest



Photo 8: Pedestrian Survey at 5m Intervals, looking southwest



Photo 9: Disturbed Not Assessed, looking south



Photo 10: Disturbed Not Assessed, looking east



Photo 11: Disturbed Not Assessed, looking south



Photo 12: Disturbed Not Assessed, looking south



Photo 13: Test Pit Survey at 5m Intervals, looking northwest



Photo 14: Test Pit Survey at 5m Intervals, looking southeast



Photo 15: Test Pit Survey, looking west



Photo 16: Pedestrian Survey at 5m Intervals, looking north



Photo 17: Pedestrian Survey at 5m Intervals, looking south



Photo 18: Pedestrian Survey at 5m Intervals, looking northeast



Photo 19: Pedestrian Survey at 5m Intervals, looking west



Photo 20: Pedestrian Survey at 5m Intervals, looking southwest



9.2 Artifacts

Plate 1: Onondaga Secondary Flake from Location 1

