Stage 1-2 Archaeological Assessment
Caistorville Road Property, Caistorville

Part of Lot 20, Concession 1, Geographic Township of Caistor,
Historical Township of West Lincoln,
now the Regional Municipality of Niagara

Submitted to:
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and

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Submitted by:

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CP Number: 2023-87

ORIGINAL REPORT

July 29th, 2024

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Mr. Arie DeHaan ('the Proponent') to conduct a Stage 1-2 archaeological assessment on part of Lot 20, Concession 1, in the geographic Township of Caistor, within the historical Township of West Lincoln, which is now the Regional Municipality of Niagara, Ontario (Figure 1). This assessment was undertaken in advance of future development on the property at Caistorville Road (the 'Development Property'; Figure 3). The development will span only the portion in the northeast portion of the Study Area that will be subject to developmental impacts (the 'Study Area'; Figure 6).

The assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario, 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario, 1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet this condition, a Stage 1-2 assessment of the Study Area was conducted during the application phase of the proposed development under archaeological consulting license P462 issued to Mr. Michael Pitul by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MCM's *Standards and Guidelines for Consultant Archaeologists* ('*Standards and Guidelines*'; Government of Ontario, 2011).

The Development Property is an roughly rectangular-shaped parcel located to the southeast of Caistorville that emcompasses almost the enirtety of the original historic Lot 20, Concession 1. Less than one-third of the original lot has been severerd to form a small neighbourhod around Broman Court to the north of the Development Property. The remainder of the lot within the Development Property comprises agricultural fields with small wet areas and woodlot containing Provincially Significant Wetland ('PSW'). The Development Property measures 35.73 hectares ('ha') and is bound to the west by PSW, to the east by Caistorville Road, to the north by residential properties on Broman Court, and to the south by Haldibrook Road (Figure 3). The current Development Application covers only a portion of the Development Property to be subject to developmental impacts and avoids the area of PSW to the west.

The reduced Study Area measures 7.39ha and occupies the northern portion of the Development Property, bound to the north by residential properties on Broman Court, to the south by PSW, to the west by woodlot, and to the east by Caistorville Road. At the time of assessment, the Study Area included two agricultural fields separated by a long and narrow strip of forested land that has been left uncultivated. The east agricultural field featured a small marshy area that is consistent with the low-lyng wet areas throughout the agricultural fields within the Development property. The northwestern corner of the Study Area comprised the remnants of an no longer in use farm that included derelict lawns, a large artificial pond with two artifical stone-lined drainage ditches, and the cement footprints of two structures.

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

The subsequent Stage 2 field assessment of the Study Area was conducted on November 27th, 2023 and April 24th, 2024. This investigation began with a property inspection, conducted according to Section 2.1.8, which is informed by Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). The inspection determined that artificial pond, two stone-lined ditches, and two building foundations retained no, or low, archaeological 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 marshy area in the east agricultural field meanwhile, was evaluated as being permanently wet and therefore was determined to retain no archaeological potential, as per Section 2.1, Standard 2.a.i. of the *Standards and Guidelines* (Government of Ontario, 2011). The previously disturbed and permanently wet areas, as confirmed during a Stage 2 property inspection, were mapped and photo documented only in accordance with Section 2.1,

Standard 6, and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

The remainder of the Study Area comprised the derelict lawn areas, forested strip, and two agricultural fields within the Study Area. The derelict lawn areas and forested strip that were inaccessible to ploughing were assessed by means of a typical test pit survey at 5m intervals. No archaeological resources were observed. The two agricultural fields were deemed accessible for ploughing and were assessed using a typical pedestrian survey at five-metre intervals. This investigation resulted in the identification and documentation of seven pre-contact Indigenous sites and two isolated findspots. The seven archaeological sites were registered with the MCM as P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215) (Tile 4 and 5 of the Supplementary Documentation).

The Stage 2 assessment of P1 (AgGw-209) resulted in the documentation of 19 pre-contact Indigenous artifacts from 19 findspot locations scattered across an area roughly 28m by 12m in the centre of the east agricultural field located approximately 58m from the eastern edge of the Study Area. All of the artifacts recovered from the site were pieces of chipping detritus and were manufactured from Onondaga or Selkirk chert. According to the morphological analysis the flake assemblage featured primarily secondary flakes (52.53%) with lesser amounts of fragmentary flakes as well as one piece of shatter flake.

The Stage 2 assessment of P3 (AgGw-211) resulted in the documentation of 16 pre-contact Indigenous artifacts from 10 surface findspots scattered across an area roughly 12m by 38m in the west agricultural field approximately 11m from the western edge of the Study Area. The artifact assemblage comprised 14 pieces of chipping detritus, manufactured from Onondaga, Haldimand, or Ancaster chert types, and 1 scraper (Cat 12; Plate 9) manufactured from Onondaga chert. According to the morphological analysis, the flake assemblage from featured primarily tool thinning flakes (40.00%) with lesser amounts of fragment flakes and secondary flakes. In addition, one piece of shatter flake was also recovered.

The Stage 2 assessment of P4 (AgGw-212) resulted in the documentation of 45 pre-contact Indigenous artifacts from 22 surface findspots scattered across an area roughly 44m by 18m in the southwestern corner of the west agricultural field within the Study Area. The artifact assemblage comprised 41 pieces of chipping detritus, two bifaces, and two scrapers. The artifacts recovered from the site were all manufactured from Onondaga chert. According to the morphological analysis, the flake assemblage featured primarily fragment flakes (48.78%) with lesser amounts of secondary flakes flakes and tool thinning flakes. In addition, one piece of shatter flake was also recovered.

The Stage 2 assessment of P5 (AgGw-213) resulted in the documentation of 15 pre-contact Indigenous artifacts from 11 surface findspots scattered across an area roughly 31m by 20m in the southwestern corner of the east agricultural field approximately 17m away from the southern edge of the Study Area. The artifacts recovered from the site were all pieces of chipping detritus manufactured from Onondaga, Ancaster, or Haldimand chert. According to the morphological analysis, the flake assemblage featured primarily fragment flakes (46.67%) with lesser amounts of tool thinning flakes and secondary flakes.

The Stage 2 assessment of P6 (AgGw-214) resulted in the documentation of 26 pre-contact Indigenous artifacts from 20 surface findspots scattered across an area roughly 41m by 40m in the southeastern portion of east agricultural field located approximately 14m from the eastern edge of the Study Area. The artifact assemblage comprised 24 pieces of chipping detritus, one biface, and one core. The artifacts recovered from the site were manufactured from Onondaga, Ancaster, or Selkirk chert. According to the morphological analysis, the flake assemblage featured primarily tool thinning (37.50%) and fragment flakes (33.33%) with lesser amounts of shatter flakes along with two secondary flakes.

Based on the results of the Stage 2 investigation, P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) have been interpreted as small activity areas for the late stages of lithic reduction activities. Given the presence of at least 10 non-diagnostic pre-contact Indigenous artifacts in a 10m by 10m pedestrian survey area within an area on or west of the Niagara Escarpment, P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6

(AgGw-214) **meet the criteria for a Stage 3 Site Specific Assessment, as per Section 2.2, Standard 1ai(3) of the *Standards and Guidelines* (Government of Ontario, 2011) and retain cultural heritage value or interest ('CHVI').**

The Stage 3 archaeological assessments of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will be conducted according to 3.2 of the *Standards and Guidelines* (Government of Ontario, 2011). Typically, a Stage 3 assessment for sites documented during a pedestrian survey of ploughed agricultural land begins with a controlled surface pickup ('CSP') across the Stage 2 limits of site, conducted as per Section 3.2.1 of the *Standards and Guidelines* (Government of Ontario, 2011). The Stage 2 pedestrian survey, however, consisted of an intensive surface collection across the entire site limits within the agricultural fields; all artifacts were mapped digitally and collected for laboratory analysis. Thus, the conditions for a Stage 3 CSP were met during the Stage 2 assessment. Instead, the Stage 3 assessments of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will consist of test unit excavation only, conducted according to Section 3.2.2 of the *Standards and Guidelines* (Government of Ontario, 2011).

The Stage 3 assessment of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will consist of the hand excavation of one 1m square test units every 10m across the Stage 2 site limits in systematic levels and into the first five centimetres of subsoil, as per Table 3.1, Standard 3 of the *Standards and Guidelines* (Government of Ontario, 2011). Additional 1m test units, amounting to 40% of the grid total, will be placed in areas of interest within the site extent as per Table 3.1, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011). Should areas of artifact concentration or features be discovered during the excavation of the initial Stage 3 grid and infill units, the grid will be reduced to five-metre intervals, with 20% infill in those areas as per Table 3.1, Standards 1 and 2 of the *Standards and Guidelines* (Government of Ontario, 2011). All excavated soil will be screened through six-millimetre mesh; all recovered artifacts will be recorded by their corresponding grid unit designation and collected for laboratory analysis. If a subsurface cultural feature is encountered, the plan of the exposed feature will be recorded and geotextile fabric will be placed over the unit before backfilling the unit.

The Stage 2 assessment of P2 (AgGw-210) resulted in the documentation of two pre-contact Indigenous artifacts from two findspot locations located approximately 14m from each other in the northwestern portion of the east agricultural field within the Study Area. One piece of chipping detritus was recovered and identified as a fragmentary flake manufactured from Haldimand chert. Additionally, a single fragmentary projectile point manufactured from Onondaga chert was recovered during the pedestrian survey of P2 (AgGw-210). The notched projectile point is missing most of the base and has an irregular shape with one nearly straight edge and one convex edge. It is possibly a Stanley point dating to the Middle Archaic.

The Stage 2 assessment of P7 (AgGw-215) resulted in the documentation of 6 pre-contact Indigenous artifacts from 6 surface findspots scattered across an area roughly 15m by 32m in the eastern portion of the east agricultural field approximately 40m from the eastern edge of the Study Area. The artifact assemblage comprised one projectile point fragment manufactured from Onondaga chert and five pieces of chipping detritus manufactured from Onondaga, Haldimand, and Ancaaster chert. According to the morphological analysis, the flake assemblage from featured primarily fragment flakes (60.00%) along with one primary flake and one secondary flake.

Findspot 1 comprises a single piece of chipping detritus manufactured from Onandaga chert recovered during the pedestrian survey of the east agricultural field approximately 48m to the north of P1 (AgGw-209). Findspot 2 comprises a single piece of chipping detritus manufactured from Haldimand chert recovered during the pedestrian survey of the east agricultural field approximately 24m to the north of P1 (AgGw-209). Both were identified as fragment flakes.

Given the results of the Stage 2 investigation, P2 (AgGw-210), P7 (AgGw-215), Findspot 1, and Findspot 2 have been interpreted as a small activity area of unknown function, occupied by unspecified Indigenous people during the pre-contact period. Given the isolated nature of P2 (AgGw-210), P7 (AgGw-215), Findspot 1, and Findspot 2, **they do 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). The CHVI of P2 (AgGw-210) and P7 (AgGw-210) is judged to be sufficiently documented.**

The Executive Summary highlights key points from the report only; for a more detailed discussion regarding the results of the current Stage 1-2 assessment, including a complete set of recommendations, the reader should examine the complete report.

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Generous contributions by Mr. Arie DeHaan made this report possible.

1.0 Project Context

1.1 Development Context

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

- 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:

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

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

1.2 Historical Context

1.2.1 Post-Contact Indigenous Resources

Prior to the arrival of European settlers, much of the central and southern Ontario was occupied by Iroquoian speaking linguistic groups that had united to form confederacies, including the Huron-Wendat, the Neutral (or Attawandaran), and the Petun in Ontario, as well as the Five Nations Iroquois Confederacy in Upper New York State (Warrick, 2013; Birch, 2010). Of these groups, the Huron-Wendat established themselves to the east of the Niagara escarpment and the Neutral, to the west (Warrick, 2000).

Throughout the middle of the 17th century, the Iroquois Confederacy sought to expand upon their territory and to monopolize the fur 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).

At this same time, the Anishinaabeg Nation, an Algonkian-speaking community situated inland from the northern shore of Lake Huron, began to challenge the Haudenosaunee for dominance in the Lake Huron and Georgian Bay region in order to advance their own role in the fur trade (Gibson, 2006). The Algonkian-speaking groups that settled in the area bound by Lake Ontario, Lake Erie, and Lake Huron were referred to by the English as the Chippewas or Ojibwas. By 1680, the Ojibwa began expanding into the evacuated Huron-Wendat territory, and eventually into Southern Ontario. By 1701, the Haudenosaunee had been driven out of Ontario completely and were replaced by the Ojibwa (Gibson, 2006; Schmalz, 1991).

The late 17th and early 18th centuries also mark the arrival of an Ojibwa band known as the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes. 'The Mississaugas' is the name that the Jesuits had used in 1840 for the Algonquin community living near the Mississagi River on the northwestern shore of Lake Huron (Smith, 2002). 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 (Praxis Research Associates, n.d.).

From the beginning of the 18th century until the end of the Seven Year War in 1763, the Ojibwa nation, including the Mississaugas, experienced a golden age in trade holding no alliance with either the French or the British (Schmalz, 1991). At the end of the 17th century, the Mississaugas' settled permanently in Southern Ontario (Praxis Research Associates, n.d.). Around this same time, in 1722, the Five Nation Iroquois Confederacy adopted the Tuscarora in New York becoming the Six Nations (Pendergast, 1995).

The Study Area first entered the Euro-Canadian historical record on December 7th, 1792, as part of Treaty No. 3, which included land acquired in the 'Between the Lakes Purchase' dating to May 22, 1784. According to the terms of the treaty, the Mississaugas ceded to the Crown approximately 3,000,000 acres of land between Lake Huron, Lake Erie, and Lake Ontario in return for trade goods valued at £1180.

The limits of the Treaty 3 lands are documented as comprising,

> *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, pp. 17-8

One of the stated objectives of the Between the Lakes Purchase was "to procure for that part of the Six Nation Indians coming into Canada a permanent abode" (Morris, 1943, p. 17). Shortly after the transaction had been finalised in May of 1784, Sir Frederick Haldimand, the Governor of Québec, made preparations to grant a portion of land to those Six Nations who remained loyal to the Crown during the American War of Independence. More specifically, Haldimand arranged for the purchase of approximately 550,000 acres of land adjacent to the Treaty 3 limits from the Mississaugas. This tract of land, referred to as either the Haldimand Tract or the 1795 Crown Grant to the Six Nations, was provided for in the Haldimand Proclamation of October 25th, 1784 and was intended to extend a distance of six miles on each side of the Grand River from mouth to source (Weaver, 1978). By the end of 1784, representatives from each constituent nation of the Six Nations, as well as other allies, relocated to the Haldimand Tract with Joseph Brant (Weaver, 1978; Tanner, 1987).

Throughout southern Ontario, the size and nature of the pre-contact settlements and the subsequent spread and distribution of Indigenous material culture began to shift with the establishment of European settlers. By 1834 it was accepted by the Crown that losses of portions of the Haldimand Tract to Euro-Canadian settlers were too numerous for all lands to be returned. Lands in the Lower Grand River area were surrendered by the Six Nations to the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township (Page, 1879; Weaver, 1978; Tanner, 1987). Following the population decline and the surrender of most of their lands along the Credit River, the Mississaugas were given 6000 acres of land on the Six Nations Reserve, establishing the Mississaugas of New Credit First Nation, now the Mississaugas of the Credit First Nation, in 1847 (Smith, 2002)

Despite the encroachment of European settlers on previously established Indigenous territories, "written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought" (Ferris, 2009, p. 114). As Ferris observes, despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The Study Area is located within part of Lot 20, Concession 1, in the geographic Township of Caistor, within the historical Township of West Lincoln, which is now the Regional Municipality of Niagara, Ontario (Figure 1).

In 1763, the Treaty of Paris brought an end to the Seven Years' War, contested between the British, the French, and their respective allies. Under the Royal Proclamation of 1763, the large stretch of land from Labrador in the east, moving southeast through the Saint Lawrence River Valley to the Great Lakes and on to the confluence of the Ohio and Mississippi Rivers became the British Province of Québec (Niagara Historical Society and Museum, 2008).

On July 24, 1788, Sir Guy Carleton, the Governor-General of British North America, divided the Province of Québec into the administrative districts of Hesse, Nassau, Mecklenburg, and Lunenburg (Archives of Ontario, 2012-2024). 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, including Lincoln County, stretching from Essex in the west to Glengarry in the east. Each new county was named after a county in England or Scotland; the constituent townships were then given the names of the corresponding townships from each original British county (Powell & Coffman, 1956).Later that year, the four

districts originally established in 1788 were renamed the Western, Home, Midland, and Eastern Districts.

As population levels in Upper Canada increased, smaller and more manageable administrative bodies were needed resulting in the establishment of many new counties and townships. As part of this realignment, the boundaries of the Home and Western Districts were shifted and the London and Niagara Districts were established. Under this new territorial arrangement, the Study Area became part of the Niagara District (Archives of Ontario, 2012-2024). In 1845, after years of increasing settlement that began after the War of 1812, the southern portion of Lincoln County was severed to form Welland County, of which Caistor Township was a part. The two counties would be amalgamated once again in 1970 to form the Regional Municipality of Niagara.

The Township of Caistor derived its name from the north English town of Caistor in Lincolnshire and was opened for settlement in 1798. The first non-indigenous settler of the township was an escaped slave and black man named Diamond, who, in 1778 constructed an isolated cabin along a spring grove at the banks of the Welland River and resided there (McBride, 2009). In 1782, Diamond sold his cabin to Hendrich Dochstader, a United Empire Loyalist from New York State. Among the first European settlers to actively farm in the area, there was John, James, Alexander and Matthew Lymburner, who arrived between 1794 and 1796. John Lymburner built the first mill in the township in 1799, located on Lot 6, Concession 2 (Middleton & Landon, 1927). By the middle of the 18th century, Caistor Township was home to 306 residents, and was producing a significant crop of wheat, barley, peas and oats (Mitchell & Co., 1865).

Community centres within Caistor Twonship included Abingdon, Caistor Centre, and Caistorville. Caistorville would become a prosperous community along the Welland River. At its height, Caistorville included two churches, one Anglican and one Methodist, two general stores, two taverns and eventually a post office and public school (Exploring Niagara, 2017).

The current Study Area occupies a part of Lot 20, Concession 1 in Caistor Township. According to the *Historical Atlas*, the Lot was bounded by the early settlement of Caistorvile in its northwest corner. The entire lot was owned by Jason H. Stevenson, who was a freehold farmer (Union Publishing Company, 1885). The Study Area is located in the nothern portion of the Lot along a historic road, now known as Caistorville Road. The Welland River, labelled as Chippawa Creek, is depicted running alongside the town of Caistorville to the North. Several structures, orchards and the early community of Warner are also depicted along Chippawa Creek to either side.

It should be recognised, however, that although significant and detailed landowner information is available on the current *Illustrated Atlas*, historical county atlases were funded by subscriptions fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston, 1997). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore & Head, 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Development Property is an roughly rectangular-shaped parcel located to the southeast of Caistorville that emcompasses almost the enirtety of the original historic Lot 20, Concession 1. Less than one-third of the original lot has been severerd to form a small neighbourhod around Broman Court to the north of the Development Property. The remainder of the lot within the Development Property comprises agricultural fields with small wet areas and woodlot containing Provincially Significant Wetland ('PSW'). The Development Property measures 35.73 hectares ('ha') and is bound to the west by PSW, to the east by Caistorville Road, to the north by residential properties on Broman Court, and to the south by Haldibrook Road (Figure 3). The current Development Application covers only a portion of the Development Property to be subject to developmental impacts and avoids the area of PSW to the west..

The reduced Study Area measures 7.39ha and occupies the northern portion of the Development Property, bound to the north by residential properties on Broman Court, to the south by PSW, to the west by woodlot, and to the east by Caistorville Road. At the time of assessment, the Study Area included two agricultural fields separated by a long and narrow strip of forested land that

has been left uncultivated. The east agricultural field featured a small marshy area that is consistent with the low-lyng wet areas throughout the agricultural fields within the Development property. The northwestern corner of the Study Area comprised the remnants of an no longer in use farm that included derelict lawns, a large artificial pond with two artifical stone-lined drainage ditches, and the cement footprints of two structures.

The majority of the region surrounding the Study Area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the mid-19th century. Much of the region today continues to be used for agricultural purposes.

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

Haldimand Clay is slowly permeable, imperfectly drained with medium to high water-holding capacities. Surface runoff is usually rapid, but water retention of the clayey soils can cause it to be droughty during dry periods (Kingston & Presant, 1989). According to Chapman and Putnam,

> ...although it was all submerged in Lake Warren, the till is not all buried by stratified clay; it comes to the surface generally in low morainic ridges in the north. In fact, there is in that area a confused intermixture of stratified clay and till. The northern part has more relief than the southern part where the typically level lake plains occur.
>
> Chapman & Putnam, 1984, p. 156

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

The Niagara Region as a whole is located within the Deciduous Forest Region of Canada and contains tree species which are typical of the more northern Great Lakes-St. Lawrence Biotic zone, such as beech, sugar maple, white elm, basswood, white oak, and butternut (MacDonald & Cooper, 1997). During pre-contact and early contact times, the land in the vicinity of the Study Area comprised a mixture of hardwood trees such as sugar maple, beech, oak, and cherry. This pattern of forest cover is characteristic of areas of clay soil within the Maple-Hemlock Section of the Great Lakes-St. Lawrence Forest Province-Cool Temperate Division (McAndrews & Manville, 1987). In the early 19th, Euro-Canadian settlers began to clear the forests for agricultural purposes.

The closest source of potable water is the Welland River that runs west to east approximately 400m to the north of the Study Area.

1.3.2 Pre-Contact Indigenous Land Use

This portion of southern Ontario has been demonstrated to have been occupied by people as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, people were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Caistor Township, based on Ellis and Ferris (1990).

Table 1: Cultural Chronology for Caistor 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

Time Period	Cultural Period	Comments
1000–400 BC	Early Woodland	large and small camps spring congregation/fall dispersal introduction of pottery
400 BC–AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade network
AD 800–1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300–1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large, palisaded villages
AD 1400–1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Previous Identified Archaeological Work

In order to compile an inventory of known archaeological resources in the vicinity of the Study Area, Detritus consulted the ASDB. The ASDB, which is maintained by the MCM (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 13 kilometres ('km') east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area lies within block AgGw.

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 MCM 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, no sites have been registered within 1km of the Study Area. To the best of Detritus' knowledge, no additional assessments have been conducted on adjacent properties, nor have sites been registered within 50m of the Study Area.

1.3.4 Archaeological Potential

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

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

- Primary water sources: lakes, rivers, streams, creeks;
- secondary water sources: intermittent streams and creeks, springs, marshes and swamps;

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

As was discussed above, theclosest source potable water is the Welland River that runs west to east approximately 400m to the north of the Study Area.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The Study Area is situated within the Haldimand Clay Plain physiographic region. As was discussed earlier, the soils within this region are imperfectly drained, but suitable for pre-contact and post contact Indigenous agricultural. Given this, the distance to potable water and the length of occupation of Caistor Township prior to the arrival of Euro-Canadian settlers, the pre-contact Indigenous archaeological potential, as evidenced by the seven pre-contact sites within 1km, 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* (Page, 1876) map of Caistor Township shows the Study Area in close proximity to historical infrastructure including early roads. Considering the location of the Study Area near to the early community of Caistorville and the Welland River, the potential for post-contact Euro-Canadian archaeological resources is judged to be moderate to high.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as outlined in Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario, 2011). Aerial imagery identified possible disturbance areas within the Study Area in the form of the artificial pond, two stone-lined ditches, and two building foundations. As per Section 2.1.8 of the *Standards and Guidelines* (Government of Ontario, 2011), it is recommended that these potential disturbances be subject to a Stage 2 property inspection to confirm the limits of the disturbance. Detritus determined that the remainder of the Study Area, including the derelict lawn areas, forested strip, and two agricultural fields, demonstrated the potential for the recovery of pre-contact Indigenous, post-contact Indigenous, and Euro-Canadian archaeological resources, and were recommended for Stage 2 assessment.

2.0 Field Methods

The Stage 2 assessment of the Study Area was conducted on November 27th, 2023, and April 24th, 2024, under archaeological consulting license P462 issued to Mr. Michael Pitul by the MCM. The limits of the Study Area were established in the field using a georeferenced shapefile produced using QGIS and uploaded to a hand-held GPS device running Qfield. Buried utility locates were obtained prior to initiating fieldwork.

Table 2 provides a summary of the weather and field conditions during the Stage 2 archaeological assessment. Photos 1 to 35 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 of the *Standards and Guidelines* (Government of Ontario, 2011). Figure 4 and Figure 5 provides an illustration of the Stage 2 assessment methods, as well as photograph locations and directions.

Table 2: Field and Weather Conditions

Date	FD	Weather	Tasks and Field Conditions
27 November 2023	Jonathan Peart	High of 2°C; mix of sun and clouds	Pedestrian field survey: ploughing provided over 80% ground surface visibility Test pitting: soils dry and screened easily
24 April 2024	Jonathan Peart	High of 5°C; overcast	Pedestrian field survey: ploughing provided over 80% ground surface visibility Test pitting: soils dry and screened easily

The Stage 2 field assessment began with a property inspection conducted as per Section 2.1.8, of the *Standards and Guidelines* (Government of Ontario, 2011). According to the results of this inspection, approximately 2.61% (0.19ha) of the Study Area comprised the possible disturbance areas identified on the current aerial imagery (see Section 1.3.4 above). The disturbed areas, which included an artificial pond, two stone-lined ditches and two building foundations 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). In addition a small marshy area was noted within the eastern agricultural filled that was evaluated as being permanently wet and therefore was determined to retain no archaeological potential, as per Section 2.1, Standard 2.a.i. of the *Standards and Guidelines* (Government of Ontario, 2011). The previously disturbed and permanently wet areas, as confirmed during a Stage 2 property inspection, were mapped and photo documented only in accordance with Section 2.1, Standard 6, and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

Approximately 17.56% (1.30ha) of the Study Area comprised derelict lawn areas and forested strip that were deemed inaccessible to ploughing. These areas were subject to a typical test pit survey at five-metre intervals in accordance with Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). The test pit survey was conducted to within 1m of the built structures or until test pits show evidence of recent ground disturbance, as per Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011). Each test pit was at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil as per Section 2.1.2, Standards 5 and 6 of the *Standards and Guidelines* (Government of Ontario, 2011). The soils were then examined for stratigraphy, cultural features, or evidence of fill.

The test pits ranged in total depth from 19cm to 25cm and featured heavy clay topsoil with greyed clay subsoil near the artificial pond and drainage areas, and loamy clay topsoil and heavy clay subsoil throughout the derelict grass areas (Photos 36 to 39). Considering that each test pit was excavated 5cm into sterile subsoil, the observed topsoil layer ranged in depth from 14cm to 20cm. All soil was checked for stratigraphy and screened through six-millimetre mesh hardware cloth to facilitate the recovery of small artifacts, and then the screened material used to backfill the pit as per Section 2.1.2, Standards 7 and 9 of the *Standards and Guidelines* (Government of Ontario, 2011). No artifacts were encountered during the test pit survey.

The remaining 79.36% (5.90ha) of the Study Area comprised two agricultural fields, which were ploughed and allowed to weather as per Section 2.1.1, Standards 2 and 3 of the *Standards and Guidelines* (Government of Ontario, 2011; Photos 9 to 12). The ploughing was deep enough to

provide total topsoil exposure, and to provide 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). The ploughed area was subject to pedestrian survey at five-metre intervals in accordance with Section 2.1.1, Standard 6 of the *Standards and Guidelines* (Government of Ontario, 2011). During the pedestrian survey, when archaeological resources were recovered, survey intervals were intensified to one-metre 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 identification of seven pre-contact Indigenous archaeological sites, registered as P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215).

The Stage 2 assessment of P1 (AgGw-209) resulted in the documentation of 19 pre-contact Indigenous artifacts from 19 findspot locations scattered across an area roughly 28m by 12m in the centre of the east agricultural field located approximately 58m from the eastern edge of the Study Area.

The Stage 2 assessment of P2 (AgGw-210) resulted in the documentation of two pre-contact Indigenous artifacts from two findspot locations located approximately 14m from each other in the northwestern portion of the east agricultural field within the Study Area.

The Stage 2 assessment of P3 (AgGw-211) resulted in the documentation of 16 pre-contact Indigenous artifacts from 10 surface findspots scattered across an area roughly 12m by 38m in the west agricultural field approximately 11m from the western edge of the Study Area.

The Stage 2 assessment of P4 (AgGw-212) resulted in the documentation of 45 pre-contact Indigenous artifacts from 22 surface findspots scattered across an area roughly 44m by 18m in the southwestern corner of the west agricultural field within the Study Area.

The Stage 2 assessment of P5 (AgGw-213) resulted in the documentation of 15 pre-contact Indigenous artifacts from 11 surface findspots scattered across an area roughly 31m by 20m in the southwestern corner of the east agricultural field approximately 17m away from the southern edge of the Study Area.

The Stage 2 assessment of P6 (AgGw-214) resulted in the documentation of 26 pre-contact Indigenous artifacts from 20 surface findspots scattered across an area roughly 41m by 40m in the southeastern portion of east agricultural field located approximately 14m from the eastern edge of the Study Area.

The Stage 2 assessment of P7 (AgGw-215) resulted in the documentation of 6 pre-contact Indigenous artifacts from 6 surface findspots scattered across an area roughly 15m by 32m in the eastern portion of the east agricultural field approximately 40m from the eastern edge of the Study Area.

Despite an intensified pedestrian survey of all agricultural lands within 20m of the artifacts, no other archaeological materials were identified. All of the artifacts recovered from P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215) were digitally mapped and collected for laboratory analysis. A UTM reading was taken for each artifact, in addition to a fixed reference landmark as per Section 2.1, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011), see section 2.0 in the Supplementary Documentation. P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215) were registered with the MCM as per Section 7.12 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 seven pre-contact Indigenous sites P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215), and two isolated findspots. An inventory of the documentary record generated by fieldwork is provided in Table 3, below. Maps indicating the exact site location of all the archaeological sites and findspots as well as all UTM coordinates recorded during the assessment are included in the Supplementary Documentation to this report. A description of the locations and the recovered artifacts are provided in Sections 3.2 to 3.9 below.

Table 3: Inventory of Document Record

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

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

3.1 Cultural Material

As was discussed above, seven pre-contact Indigenous site, registered with the MCM as P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215) and two isolated findspots were identified within the Study Area. Photographs of the artifacts recovered from the Stage 2 assessment are depicted in Section 9.2 of this report.

The majority of the artifacts collected during the Stage 2 assessment were manufactured from Onondaga chert with some manufactured from Haldimand, Ancaster, or Selkirk. Chert type identifications were accomplished visually using reference materials located in the Detritus office.

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. (Eley & von Bitter, 1989). Primary outcrops have also been reported along the banks of the Grand River (Ellis & Ferris, 1990). Onondaga chert 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 Indigenous people (Eley & von Bitter, 1989).

Haldimand chert, also known as Bois Blanc chert, is a medium quality raw material that outcrops along the Bois Blanc formation between Kohler and Hagersville, as well as in Cayuga, Ontario. Dating to the Early Silurian, it derives from chalk-bearing limestones which give the material its characteristically white to light grey or buff colour and relatively low lustre (Eley & von Bitter, 1989).

Ancaster chert is a light-medium grey chert of moderate quality that outcrops from the Goat Island formation near Hamilton. Secondary deposits can be found as far east as Grimsby (Eley & von Bitter, 1989). Historically Ancaster has been also known as Lockport chert, though more recent geological studies have distinguished between these group members (Brunton & Britnell, 2011; Brunton, Turner, & Armstrong, 2009) Given the proximity of the site to the Niagara Escarpment, it is possible that the Ancaster chert artifacts recovered from the Study Area were quarried nearby.

Selkirk chert is a moderate quality raw material that outcrops close to the embouchure of the Grand River along the north shore of Lake Erie. Its distribution as a secondary source material is similar to Onondaga chert, and it is frequently encountered as far west as the Chatham area (Eley & von Bitter, 1989)

Furthermore, all pieces of chipping detritus were subject to morphological analysis following the classification scheme described by Lennox, Dodd and Murphy for the Wiacek Site (Lennox, Dodd, & Murphy, 1986) and expanded upon by Fisher for the Adder Orchard site (Fisher, 1997). The flake types that were identified during the analysis of the current Stage 2 assemblage include primary, secondary, tool thinning, fragment, and shatter flakes.

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. Fragmentary flakes are flakes that may have some identifiable flake characteristic but cannot be classified with certainty into a specific category.

Chipping detritus is the waste product from the production of stone tools and is the most frequently recovered artifact on pre-contact Indigenous sites in southern Ontario. Chipping detritus has a low significance and interpretive value when it is not associated with any diagnostic material, therefore they cannot be used to determine the cultural affiliation or time period of the occupation of a site.

3.2 P1 (AgGw-209)

The Stage 2 assessment of P1 (AgGw-209) resulted in the documentation of 19 pre-contact Indigenous artifacts from 19 findspot locations scattered across an area roughly 28m by 12m in the centre of the east agricultural field located approximately 58m from the eastern edge of the Study Area. All of the artifacts recovered from the site were pieces of chipping detritus and were manufactured from Onondaga or Selkirk chert (Cat#s 4, 5, 10, 17, and 22; Plate 1 and Plate 2).

3.2.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P1 (AgGw-209) are detailed in Table 4, Plate 1, and Plate 2.

Table 4: Flake Analysis for P1 (AgGw-209)

Chert type	Secondary		Fragmentary		Shatter		Total Analyzed	
	n	%	n	%	n	%	n	%
Onondaga	3	15.79%	1	5.26%	1	5.26%	**5**	**26.32%**
Selkirk	7	36.84%	7	36.84%	0	0%	**14**	**73.68%**
Total	10	52.63%	8	42.11%	1	5.26%	**19**	**100%**

According to the morphological analysis presented above, the flake assemblage from P1 (AgGw-209) featured primarily secondary flakes (n=10; 52.53%) with lesser amounts of fragmentary flakes (n=8; 42.11%). In addition, one piece of shatter flake (n=1; 5.26%) was also recovered. This variety of flake types suggests that primarily late stages of lithic reduction activities were undertaken at the site for the production and maintenance of formal tools and projectile points.

3.2.2 Artifact Catalogue

The complete Stage 2 artifact assemblage from P1 (AgGw-209) is provided below in Appendix 10.1.1 below.

3.3 P2 (AgGw-210)

The Stage 2 assessment of P2 (AgGw-210) resulted in the documentation of two pre-contact Indigenous artifacts from two findspot locations located approximately 14m from each other in the northwestern portion of the east agricultural field within the Study Area.

One piece of chipping detritus was recovered and identified as a fragmentary flake manufactured from Haldimand chert.

3.3.1 Projectile Point

Additionally, a single projectile point manufactured from Onondaga chert was recovered during the pedestrian survey of P2 (AgGw-210). The notched projectile point is missing most of the base and has an irregular shape with one nearly straight edge and one convex edge. It is possibly a Stanley point dating to the Middle Archaic and measures 42.8mm in length, 29.4mm in width and 8.3mm in thickness. (Cat #2; Plate 3).

3.3.2 Artifact Catalogue

The complete Stage 2 artifact assemblage from P2 (AgGw-210) is provided below in Appendix 10.1.2 below.

3.4 P3 (AgGw-211)

The Stage 2 assessment of P3 (AgGw-211) resulted in the documentation of 16 pre-contact Indigenous artifacts from 10 surface findspots scattered across an area roughly 12m by 38m in the west agricultural field approximately 11m from the western edge of the Study Area. The artifact assemblage comprised 14 pieces of chipping detritus, manufactured from Onondaga, Haldimand, or Ancaster chert types, and 1 scraper (Cat 12; Plate 9), manufactured from Onondaga chert.

3.4.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P3 (AgGw-211) are detailed Table 5.

Table 5: Flake Analysis for P3 (AgGw-211)

	Secondary		Tool Thinning		Fragment		Shatter		Total Analyzed	
Chert Type	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Ancaster	0	0.00	0	0.00	0	0.00	1	6.67	1	6.67
Haldimand	0	0.00	0	0.00	2	13.33	0	0.00	2	13.33
Onondaga	3	20.00	6	40.00	3	20.00	0	0.00	12	80.00
Grand Total	**3**	**20.00**	**6**	**40.00**	**5**	**33.33**	**1**	**6.67**	**15**	**100.00**

According to the morphological analysis presented above, the flake assemblage from P3 (AgGw-211) featured primarily tool thinning flakes (n=6; 40.00%) with lesser amounts of fragment flakes (n=5; 33.33%) and secondary flakes (n=3; 20.00). In addition, one piece of shatter flake (n=1; 6.67%) was also recovered. This variety of flake types suggests that late stages of lithic reduction activities were undertaken at the site, for the production and maintenance of formal tools and projectile points.

3.4.2 Artifact Catalogue

The complete Stage 2 artifact assemblage from P3 (AgGw-211) is provided below in Appendix 10.1.3 below.

3.5 P4 (AgGw-212)

The Stage 2 assessment of P4 (AgGw-212) resulted in the documentation of 45 pre-contact Indigenous artifacts from 22 surface findspots scattered across an area roughly 44m by 18m in the southwestern corner of the west agricultural field within the Study Area. The artifact

assemblage comprised 41 pieces of chipping detritus, two bifaces and two scrapers. The artifacts recovered from the site were all manufactured from Onondaga chert.

3.5.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P4 (AgGw-212) are detailed Table 6 and Plates 4, 6, and 8.

Table 6: Flake Analysis for P4 (AgGw-212)

Chert Type	Secondary		Tool Thinning		Fragment		Shatter		Total Analyzed	
	n	%	n	%	n	%	n	%	n	%
Onondaga	12	29.27	8	19.51	20	48.78	1	2.44	41	100.00

According to the morphological analysis presented above, the flake assemblage from P4 (AgGw-212) featured primarily fragment flakes (n=20; 48.78%) with lesser amounts of secondary flakes flakes (n=12; 29.27%) and tool thinning flakes (n=8; 19.51%), along with one shatter fragment (n=1; 2.44%). This variety of flake types suggests that primarily late stages of lithic reduction activities were undertaken at the site, for the production and maintenance of formal tools and projectile points.

3.5.2 Bifaces

In addition, two biface fragments were documented during the pedestrian survey in the vicinity of P4 (AgGw-212), detailed in Table 7, Plate 7, and Plate 10.

Table 7: P4 (AgGw-212) Biface Metrics

Cat#	Chert Type	Length (mm)	Width (mm)	Thickness (mm)	Comment
19	Onondaga	26.9	12.2	5.9	middle stage biface edge fragment with random percussion scars and curved edge
28	Onondaga	27.6	30.9	9.9	middle stage biface distal fragment with alternating percussion flake scars

The term biface refers to any unfinished, discarded, or broken bifacially worked form that cannot be identified as a specific tool or projectile point. Therefore, bifaces could represent a variety of tools with different functions. The biface fragment recovered an incomplete tool of unknown intended use. Due to its long span of production, the biface cannot be used to determine the cultural affiliation or time period of the occupation of a site.

3.5.3 Scrapers

Also included in the P4 (AgGw-212) assemblage were two scrapers manufactured from Onondaga chert, detailed in Table 8, Plate 5, and Plate 11.

Table 8: P4 (AgGw-212) Scraper Metrics

Cat#	Chert Type	Length (mm)	Width (mm)	Thickness (mm)	Comment
14	Onondaga	38.2	29.7	6.6	secondary flake modified with unifacial retouch along the distal margin into a endscraper
29	Onondaga	27.2	19.7	5.9	piece of shatter with steep unifacial retouch along one margin suggestive of use as an end-scraper

Due to their long span of production, bifacial and unifacial tools cannot be used to determine the cultural affiliation or time period of the occupation of a site.

3.5.4 Artifact Catalogue

The complete Stage 2 artifact assemblage from P4 (AgGw-212) is provided below in Appendix 10.1.4 below.

3.6 P5 (AgGw-213)

The Stage 2 assessment of P5 (AgGw-213) resulted in the documentation of 15 pre-contact Indigenous artifacts from 11 surface findspots scattered across an area roughly 31m by 20m in the southwestern corner of the east agricultural field approximately 17m away from the southern edge of the Study Area. The artifacts recovered from the site were all pieces of chipping detritus manufactured from Onondaga, Ancaster, or Haldimand chert.

3.6.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P5 (AgGw-213) are detailed Table 9 and Plates 12.

Table 9: Flake Analysis for P5 (AgGw-213)

Chert Type	Secondary		Tool Thinning		Fragment		Total Analyzed	
	n	%	n	%	n	%	n	%
Ancaster	1	6.67	0	0.00	1	6.67	2	13.33
Haldimand	0	0.00	0	0.00	2	13.33	2	13.33
Onondaga	3	20.00	4	26.67	4	26.67	11	73.33
Grand Total	**4**	**26.67**	**4**	**26.67**	7	**46.67**	**15**	**100.00**

According to the morphological analysis presented above, the flake assemblage from P5 (AgGw-213) featured primarily fragment flakes (n=7; 46.67%) with lesser amounts of tool thinning flakes (n=4; 26.67%) and secondary flakes (n=4; 26.67%). This variety of flake types suggests that primarily late stages of lithic reduction activities were undertaken at the site, for the production and maintenance of formal tools and projectile points.

3.6.2 Artifact Catalogue

The complete Stage 2 artifact assemblage from P5 (AgGw-213) is provided below in Appendix 10.1.5 below.

3.7 P6 (AgGw-214)

The Stage 2 assessment of P6 (AgGw-214) resulted in the documentation of 26 pre-contact Indigenous artifacts from 20 surface findspots scattered across an area roughly 41m by 40m in the southeastern portion of east agricultural field located approximately 14m from the eastern edge of the Study Area. The artifact assemblage comprised 24 pieces of chipping detritus, one biface, and one core. The artifacts recovered from the site were manufactured from Onondaga, Ancaster, and Selkirk chert types.

3.7.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P6 (AgGw-214) are detailed Table 10.

Table 10: Flake Analysis for P6 (AgGw-214)

	Secondary		Tool Thinning		Fragment		Shatter		Total Analyzed	
Chert Type	n	%	n	%	n	%	n	%	n	%
Ancaster	0	0.00	0	0.00	1	4.17	1	4.17	2	8.33
Onondaga	2	8.33	9	37.50	5	20.83	4	16.67	20	83.33
Selkirk	0	0.00	0	0.00	2	8.33	0	0.00	2	8.33
Grand Total	**2**	**8.33**	**9**	**37.50**	**8**	**33.33**	**5**	**20.83**	**24**	**100.00**

According to the morphological analysis presented above, the flake assemblage from P6 (AgGw-214) featured primarily tool thinning (n=9; 37.50%) and fragment flakes (n=8; 33.33%) with lesser amounts of shatter flakes (n=5; 20.83%), along with two secondary flakes (8.33%). This

variety of flake types suggests that primarily late stages of lithic reduction activities were undertaken at the site, for the production and maintenance of formal tools and projectile points.

3.7.2 Biface

One biface was recovered during the pedestrian survey of P6 (AgGw-214). The biface was manufactured from Onondaga chert and could be categorized as an early stage bifacial edge fragment. It measures 32.3mm in length, 24.9mm in width, and 9.4mm in thickness (Cat #8; Plate 15).

The term biface refers to any unfinished, discarded, or broken bifacially worked form that cannot be identified as a specific tool or projectile point. Therefore, bifaces could represent a variety of tools with different functions. The biface fragment recovered an incomplete tool of unknown intended use. Due to its long span of production, the biface cannot be used to determine the cultural affiliation or time period of the occupation of a site.

3.7.3 Core

Additionally, one core manufactured from Onondaga chert was recovered during the pedestrian survey of P6 (AgGw-214). The artifact was an amorphous core fragment with large percussion scars propogating from multiple angles. One edge might have some use-wear or evidence of platform preparation. It measures 48.5mm in length, 40.5mm in width, and 17.8mm in thickness. (Cat #6; Plate 14).

3.7.4 Artifact Catalogue

The complete Stage 2 artifact assemblage from P6 (AgGw-214) is provided below in Appendix 10.1.6 below.

3.8 P7 (AgGw-215)

The Stage 2 assessment of P7 (AgGw-215) resulted in the documentation of 6 pre-contact Indigenous artifacts from 6 surface findspots scattered across an area roughly 15m by 32m in the eastern portion of the east agricultural field approximately 40m from the eastern edge of the Study Area. The artifact assemblage comprised one projectile point fragment manufactured from Onondaga chert and five pieces of chipping detritus manufactured from Onondaga, Haldimand, and Ancaaster chert types.

3.8.1 Chipping Detritus

The results of the morphological analysis of the chipping detritus recovered from P7 (AgGw-215) are detailed Table 11 and Plate 13.

Table 11: Flake Analysis for P7 (AgGw-215)

	Primary		Secondary		Fragment		Total Analyzed	
Chert Type	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Ancaster	1	20.00	0	0	1	20.00	2	40.00
Haldimand	0	0	0	0	2	40.00	2	40.00
Onondaga	0	0	1	20.00	0	0	1	20
Grand Total	**1**	**20**	**1**	**20**	**3**	**60**	**5**	**100**

According to the morphological analysis presented above, the flake assemblage from P7 (AgGw-215) featured primarily fragment flakes (n=3; 60.00%) along with one primary flake (20.00%) and one secondary flake (20.00%). This variety of flake types suggests that all stages of lithic reduction activities were undertaken at the site, including early-stage reduction for the creation of blanks and bifaces, and late-stage reduction for the production and maintenance of formal tools and projectile points.

3.8.2 Projectile Point

Additionally, a single projectile point manufactured from Onondaga chert was recovered during the pedestrian survey of P7 (AgGw-215). The projectile point is a medial fragment missing its tip and base. It is relatively thick and shows numerous step fractures and one margin is curved. These characteristics suggest it broke during its manufacture. The projectile point measures 53.3mm in length, 26.1mm in width and 9.6mm in thickness (Cat #1; Plate 12).

3.8.3 Artifact Catalogue

The complete Stage 2 artifact assemblage from P7 (AgGw-215) is provided below in Appendix 10.1.7 below.

3.9 Isolated Findspots

3.9.1 Findspot 1

Findspot 1 comprises a single piece of chipping detritus manufactured from Onandaga chert recovered during the pedestrian survey of the east agricultural field approximately 48m to the north of P1 (AgGw-209).

The fragment was identified as a fragment flake.

No other artifacts were documented during the pedestrian survey in the vicinity of Findspot 1. Given the isolated nature of the artifact, it is difficult to draw any useful conclusions regarding site function.

3.9.2 Findspot 2

Findspot 2 comprises a single piece of chipping detritus manufactured from Haldimand chert recovered during the pedestrian survey of the east agricultural field approximately 24m to the north of P1 (AgGw-209)

The fragment was identified as a fragment flake.

No other artifacts were documented during the pedestrian survey in the vicinity of Findspot 1. Given the isolated nature of the artifact, it is difficult to draw any useful conclusions regarding site function.

3.9.3 Artifact Catalogue

The complete Stage 2 artifact assemblage of the isolated findspots is provided below in Appendix 10.1.8 below.

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment on the property at Caistorville Road in Casitorville.

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

The subsequent Stage 2 field assessment of the Study Area was conducted on November 27th, 2023 and April 24th, 2024. This investigation began with a property inspection, conducted according to Section 2.1.8, which is informed by Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). The inspection determined that artificial pond, two stone-lined ditches, and two building foundations retained no, or low, archaeological 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 marshy area in the east agricultural field meanwhile, was evaluated as being permanently wet and therefore was determined to retain no archaeological potential, as per Section 2.1, Standard 2.a.i. of the *Standards and Guidelines* (Government of Ontario, 2011). The previously disturbed and permanently wet areas, as confirmed during a Stage 2 property inspection, were mapped and photo documented only in accordance with Section 2.1, Standard 6, and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

The remainder of the Study Area comprised the derelict lawn areas, forested strip, and two agricultural fields within the Study Area. The derelict lawn areas and forested strip that were inaccessible to ploughing were assessed by means of a typical test pit survey at 5m intervals. No archaeological resources were observed. The two agricultural fields were deemed accessible for ploughing and were assessed using a typical pedestrian survey at five-metre intervals. This investigation resulted in the identification and documentation of seven pre-contact Indigenous sites and two isolated findspots. The seven archaeological sites were registered with the MCM as P1 (AgGw-209), P2 (AgGw-210), P3 (AgGw-211), P4 (AgGw-212), P5 (AgGw-213), P6 (AgGw-214), and P7 (AgGw-215) (Tile 4 and 5 of the Supplementary Documentation).

The Stage 2 assessment of P1 (AgGw-209) resulted in the documentation of 19 pre-contact Indigenous artifacts from 19 findspot locations scattered across an area roughly 28m by 12m in the centre of the east agricultural field located approximately 58m from the eastern edge of the Study Area. All of the artifacts recovered from the site were pieces of chipping detritus and were manufactured from Onondaga or Selkirk chert. According to the morphological analysis the flake assemblage featured primarily secondary flakes (52.53%) with lesser amounts of fragmentary flakes as well as one piece of shatter flake.

The Stage 2 assessment of P3 (AgGw-211) resulted in the documentation of 16 pre-contact Indigenous artifacts from 10 surface findspots scattered across an area roughly 12m by 38m in the west agricultural field approximately 11m from the western edge of the Study Area. The artifact assemblage comprised 14 pieces of chipping detritus, manufactured from Onondaga, Haldimand, or Ancaster chert types, and 1 scraper (Cat 12; Plate 9) manufactured from Onondaga chert. According to the morphological analysis, the flake assemblage from featured primarily tool thinning flakes (40.00%) with lesser amounts of fragment flakes and secondary flakes. In addition, one piece of shatter flake was also recovered.

The Stage 2 assessment of P4 (AgGw-212) resulted in the documentation of 45 pre-contact Indigenous artifacts from 22 surface findspots scattered across an area roughly 44m by 18m in the southwestern corner of the west agricultural field within the Study Area. The artifact assemblage comprised 41 pieces of chipping detritus, two bifaces, and two scrapers. The artifacts recovered from the site were all manufactured from Onondaga chert. According to the morphological analysis, the flake assemblage featured primarily fragment flakes (48.78%) with lesser amounts of secondary flakes flakes and tool thinning flakes. In addition, one piece of shatter flake was also recovered.

The Stage 2 assessment of P5 (AgGw-213) resulted in the documentation of 15 pre-contact Indigenous artifacts from 11 surface findspots scattered across an area roughly 31m by 20m in the southwestern corner of the east agricultural field approximately 17m away from the southern edge of the Study Area. The artifacts recovered from the site were all pieces of chipping detritus manufactured from Onondaga, Ancaster, or Haldimand chert. According to the morphological analysis, the flake assemblage featured primarily fragment flakes (46.67%) with lesser amounts of tool thinning flakes and secondary flakes.

The Stage 2 assessment of P6 (AgGw-214) resulted in the documentation of 26 pre-contact Indigenous artifacts from 20 surface findspots scattered across an area roughly 41m by 40m in the southeastern portion of east agricultural field located approximately 14m from the eastern edge of the Study Area. The artifact assemblage comprised 24 pieces of chipping detritus, one biface, and one core. The artifacts recovered from the site were manufactured from Onondaga, Ancaster, or Selkirk chert. According to the morphological analysis, the flake assemblage featured primarily tool thinning (37.50%) and fragment flakes (33.33%) with lesser amounts of shatter flakes along with two secondary flakes.

Based on the results of the Stage 2 investigation, P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) have been interpreted as small activity areas for the late stages of lithic reduction activities.

The Stage 2 assessment of P2 (AgGw-210) resulted in the documentation of two pre-contact Indigenous artifacts from two findspot locations located approximately 14m from each other in the northwestern portion of the east agricultural field within the Study Area. One piece of chipping detritus was recovered and identified as a fragmentary flake manufactured from Haldimand chert. Additionally, a single fragmentary projectile point manufactured from Onondaga chert was recovered during the pedestrian survey of P2 (AgGw-210). The notched projectile point is missing most of the base and has an irregular shape with one nearly straight edge and one convex edge. It is possibly a Stanley point dating to the Middle Archaic.

The Stage 2 assessment of P7 (AgGw-215) resulted in the documentation of 6 pre-contact Indigenous artifacts from 6 surface findspots scattered across an area roughly 15m by 32m in the eastern portion of the east agricultural field approximately 40m from the eastern edge of the Study Area. The artifact assemblage comprised one projectile point fragment manufactured from Onondaga chert and five pieces of chipping detritus manufactured from Onondaga, Haldimand, and Ancaaster chert. According to the morphological analysis, the flake assemblage from featured primarily fragment flakes (60.00%) along with one primary flake and one secondary flake.

Findspot 1 comprises a single piece of chipping detritus manufactured from Onandaga chert recovered during the pedestrian survey of the east agricultural field approximately 48m to the north of P1 (AgGw-209). Findspot 2 comprises a single piece of chipping detritus manufactured from Haldimand chert recovered during the pedestrian survey of the east agricultural field approximately 24m to the north of P1 (AgGw-209). Both were identified as fragment flakes.

Given the results of the Stage 2 investigation, P2 (AgGw-210), P7 (AgGw-215), Findspot 1, and Findspot 2 have been interpreted as a small activity area of unknown function, occupied by unspecified Indigenous people during the pre-contact period.

4.1 Preliminary Indication of Site Possibly Requiring Stage 4 Archaeological Mitigation

As is discussed below in Section 5.0, P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) retain CHVI and are recommended for Stage 3 assessment. A preliminary indication of whether the sites could be eventually recommended for Stage 4 archaeological mitigation is required under Section 7.8.3 Standard 2c of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario, 2011). No firm recommendation for, or against, Stage 4 archaeological mitigation will be made until the forthcoming Stage 3 archaeological assessments have been conducted. Given that P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) consist of a diffuse scatters of pre-contact Indigenous artifacts, it not yet clear whether a Stage 4 archaeological mitigation will be recommended for these sites.

5.0 Recommendations

Given the presence of at least 10 non-diagnostic pre-contact Indigenous artifacts in a 10m by 10m pedestrian survey area within an area on or west of the Niagara Escarpment, P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) **meet the criteria for a Stage 3 Site Specific Assessment, as per Section 2.2, Standard 1ai(3) of the *Standards and Guidelines* (Government of Ontario, 2011) and retain cultural heritage value or interest ('CHVI').**

The Stage 3 archaeological assessments of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will be conducted according to 3.2 of the *Standards and Guidelines* (Government of Ontario, 2011). Typically, a Stage 3 assessment for sites documented during a pedestrian survey of ploughed agricultural land begins with a controlled surface pickup ('CSP') across the Stage 2 limits of site, conducted as per Section 3.2.1 of the *Standards and Guidelines* (Government of Ontario, 2011). The Stage 2 pedestrian survey, however, consisted of an intensive surface collection across the entire site limits within the agricultural fields; all artifacts were mapped digitally and collected for laboratory analysis. Thus, the conditions for a Stage 3 CSP were met during the Stage 2 assessment. Instead, the Stage 3 assessments of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will consist of test unit excavation only, conducted according to Section 3.2.2 of the *Standards and Guidelines* (Government of Ontario, 2011).

The Stage 3 assessment of P1 (AgGw-209), P3 (AgGw-211), P4 (AGW-212), P5 (AgGw-213), and P6 (AgGw-214) will consist of the hand excavation of one 1m square test units every 10m across the Stage 2 site limits in systematic levels and into the first five centimetres of subsoil, as per Table 3.1, Standard 3 of the *Standards and Guidelines* (Government of Ontario, 2011). Additional 1m test units, amounting to 40% of the grid total, will be placed in areas of interest within the site extent as per Table 3.1, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011). Should areas of artifact concentration or features be discovered during the excavation of the initial Stage 3 grid and infill units, the grid will be reduced to five-metre intervals, with 20% infill in those areas as per Table 3.1, Standards 1 and 2 of the *Standards and Guidelines* (Government of Ontario, 2011). All excavated soil will be screened through six-millimetre mesh; all recovered artifacts will be recorded by their corresponding grid unit designation and collected for laboratory analysis. If a subsurface cultural feature is encountered, the plan of the exposed feature will be recorded and geotextile fabric will be placed over the unit before backfilling the unit.

Given the isolated nature of P2 (AgGw-210), P7 (AgGw-215), Findspot 1, and Findspot 2, **they do 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). The CHVI of P2 (AgGw-210) and P7 (AgGw-210) is judged to be sufficiently documented.**

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry Citizenship and Multiculturalism, 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.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

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8.0 Maps

Figure 1: Study Area Location Map

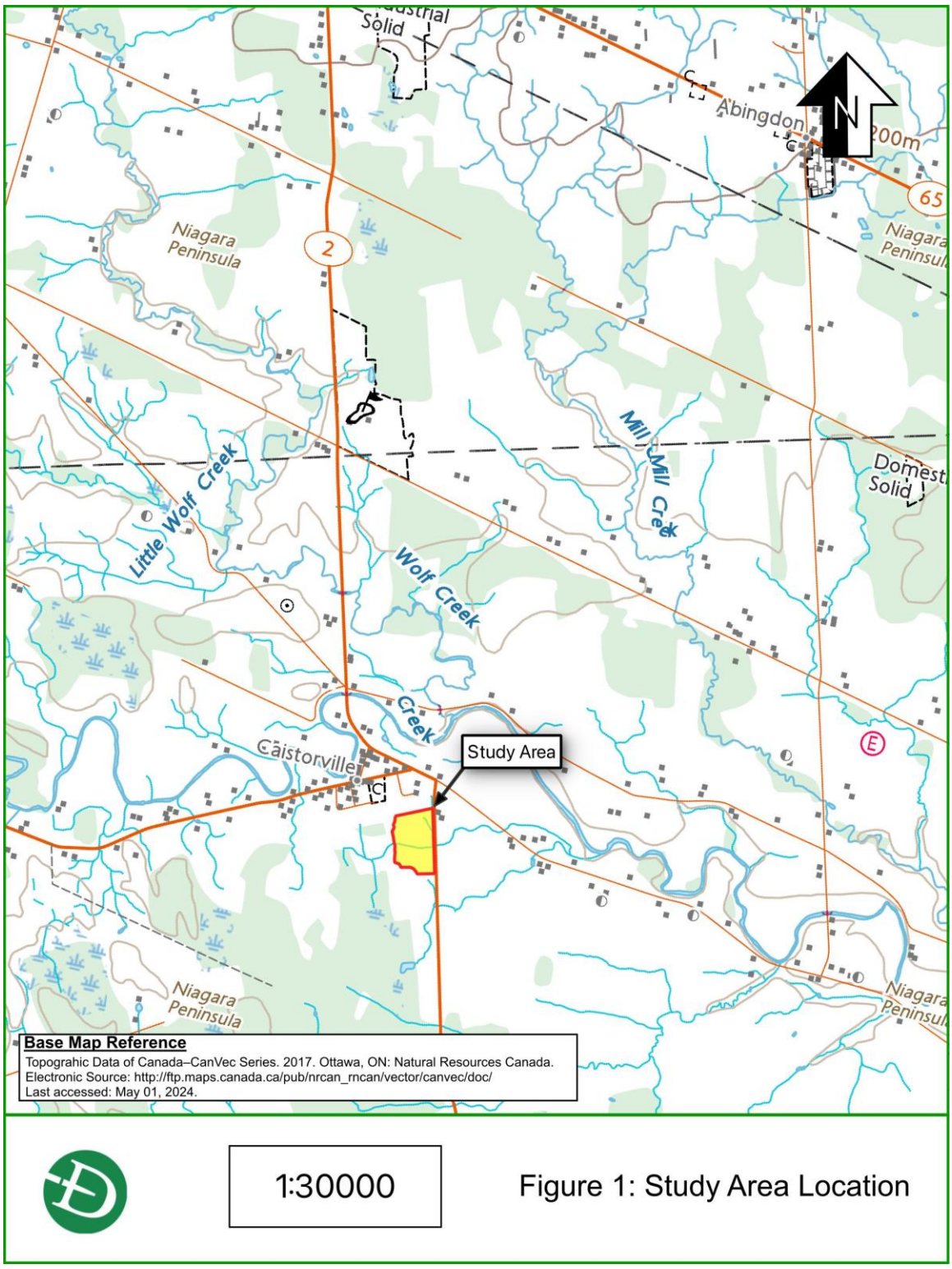
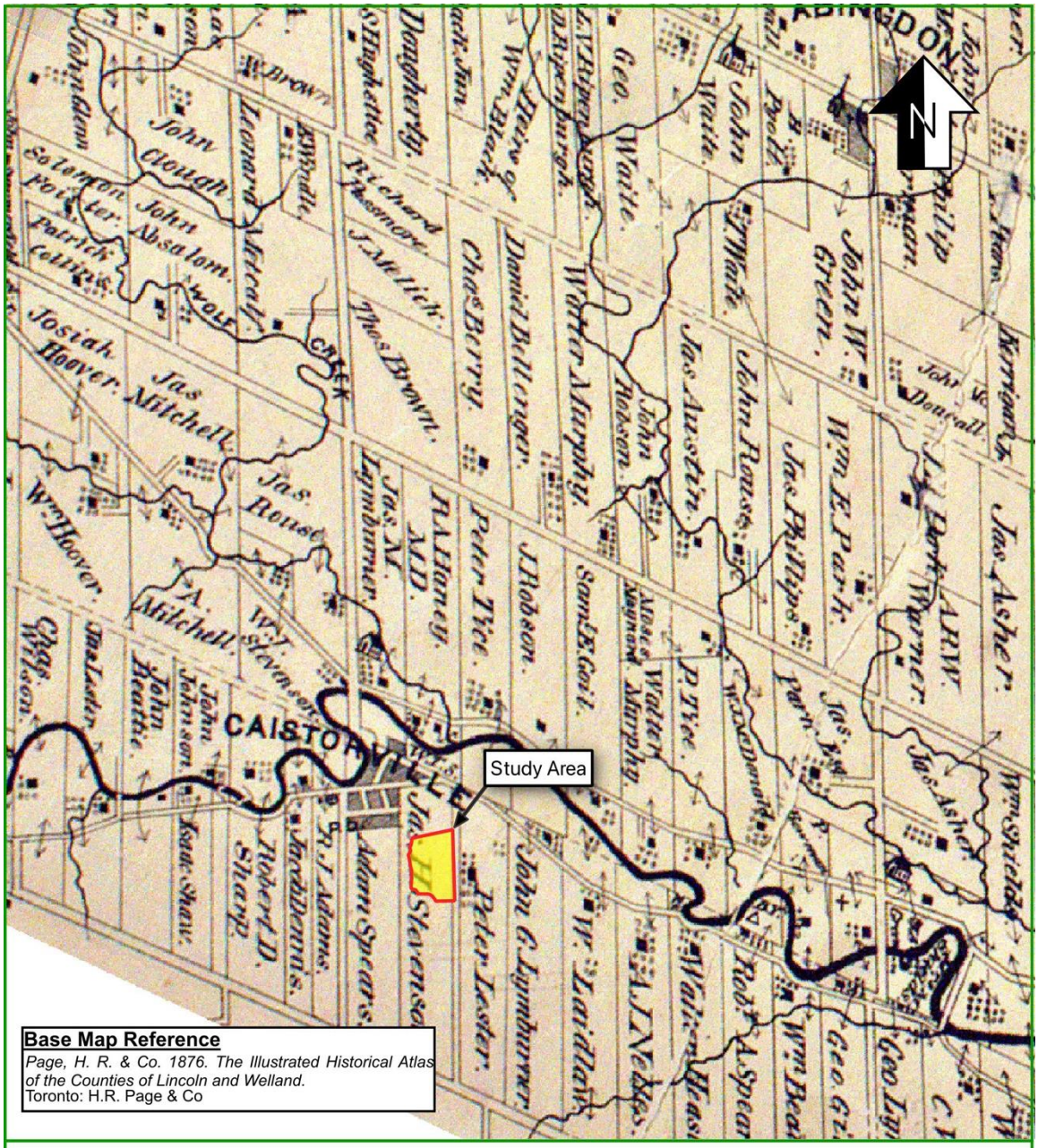


Figure 2: Historic Map Showing Study Area Location



Not to Scale

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

Figure 3: Map of the Development Property and Scoped Study Area

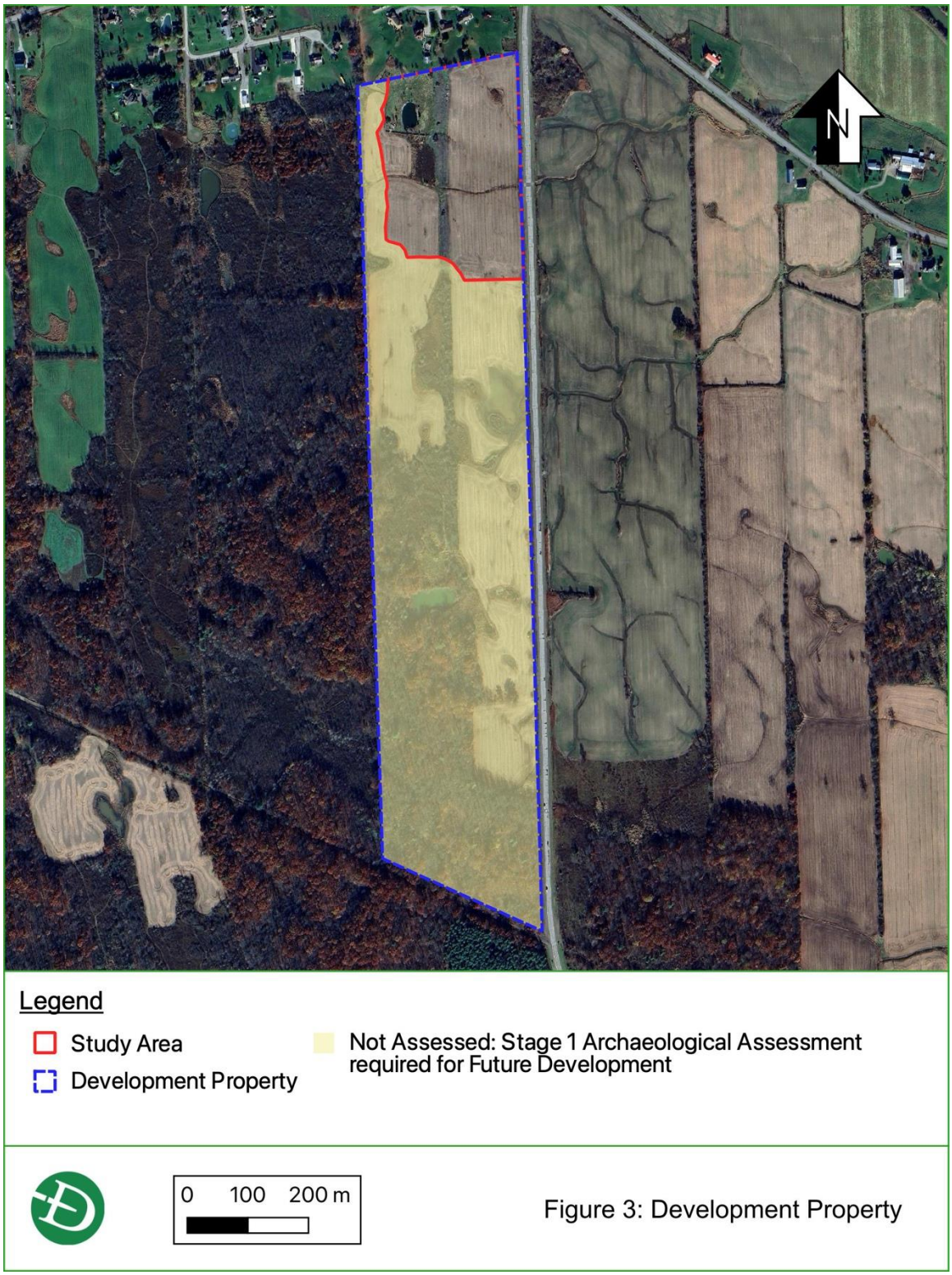


Figure 4: Stage 2 Field Methods Map

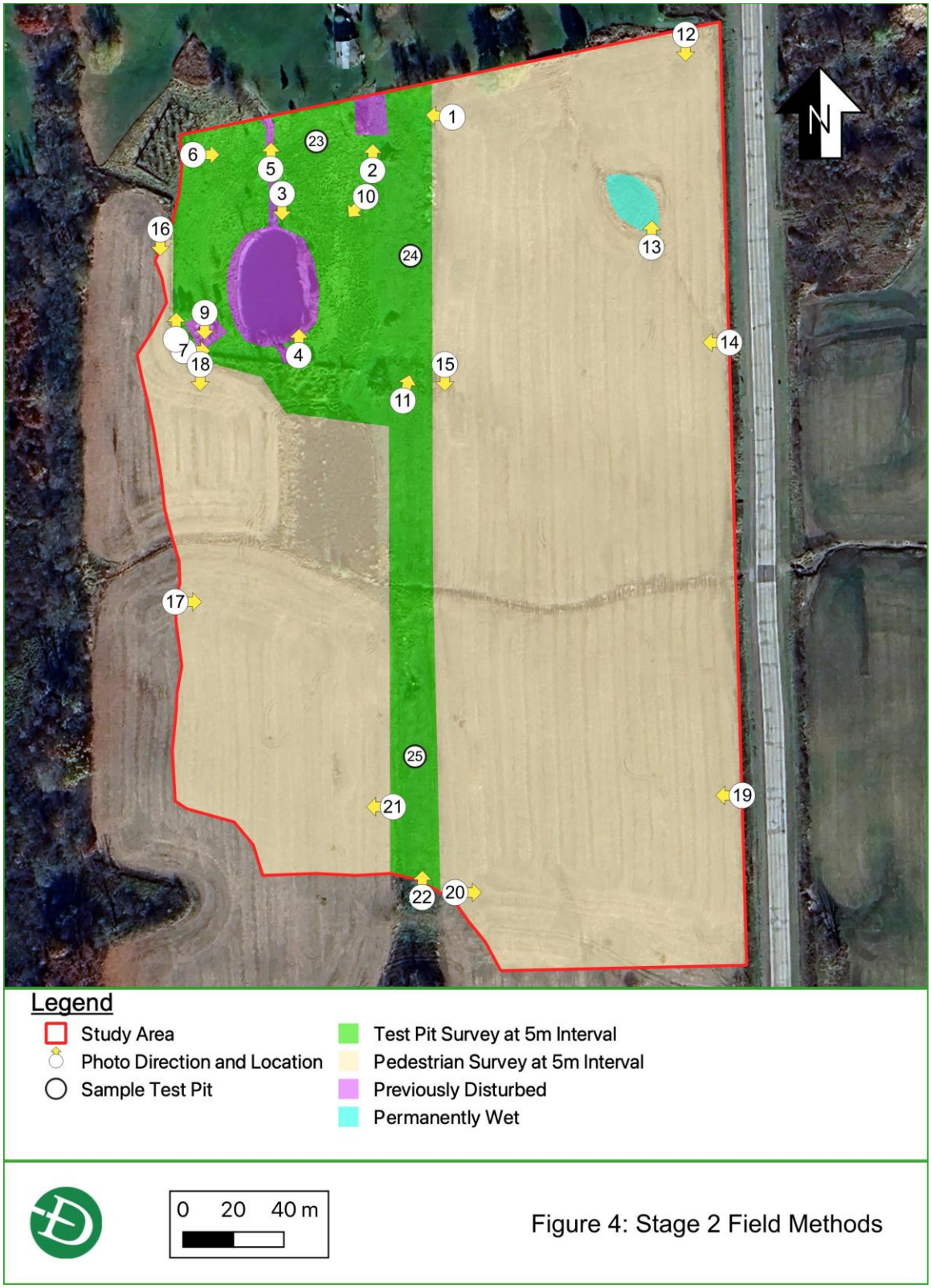
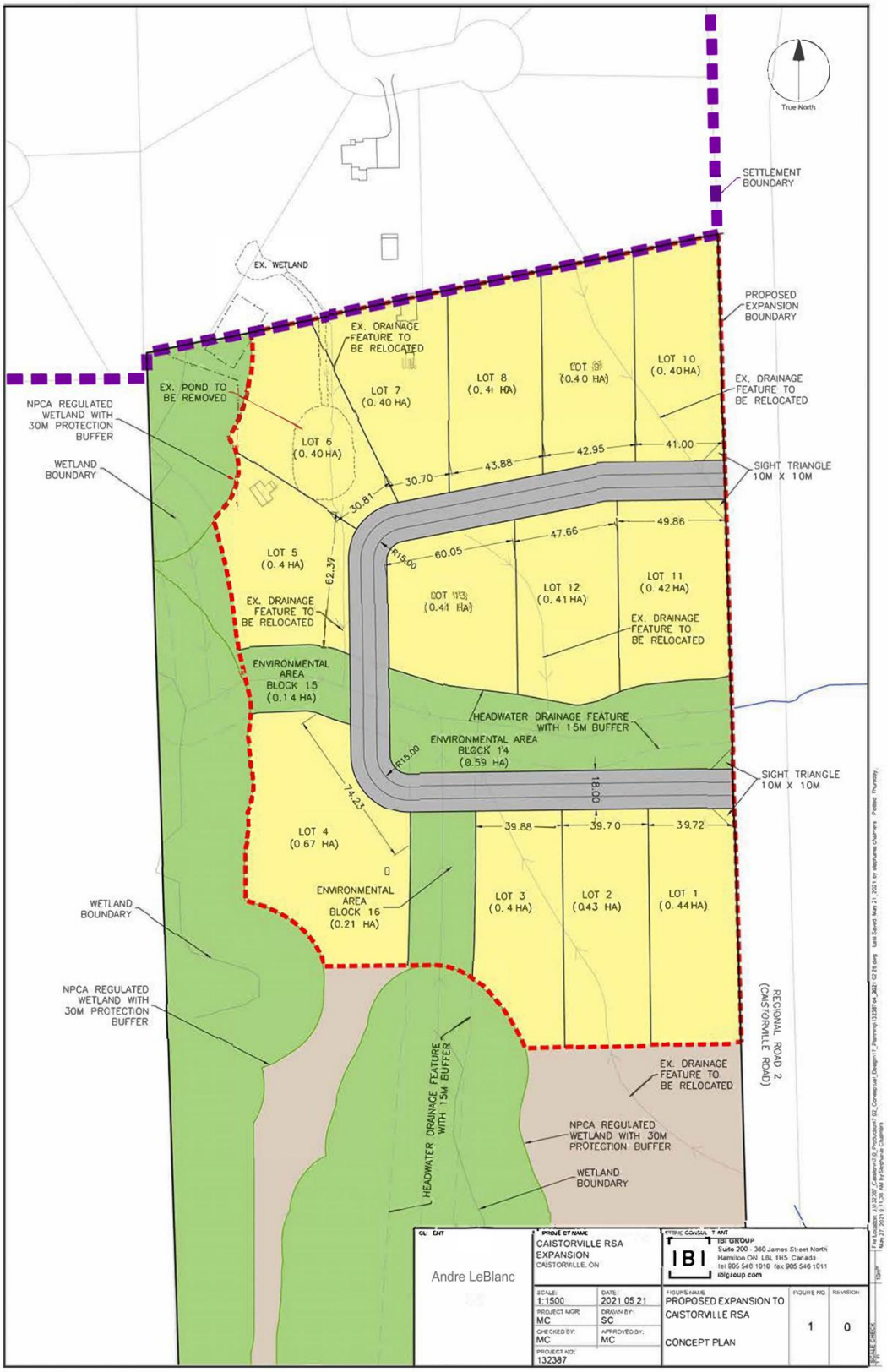


Figure 5: Stage 2 Field Methods Map in Relation to the Development Plan



Figure 4: Stage 2 Field Methods

Figure 6: Development Plan



9.0 Images

9.1 Field Photos

Photo 1: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, from southwest corner looking west



Photo 2: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, from southwest corner looking north



Photo 3: Artificial Pond, Permanently Wet, looking south



Photo 4: Artificial Pond, Permanently Wet, looking north



Photo 5: Stone-lined Drainage Ditch, Previously Disturbed, looking north



Photo 6: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking east



Photo 7: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking east



Photo 8: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking north



Photo 9: Building foundation, Previously Disturbed, looking south



Photo 10: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking southwest



Photo 11: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking north



Photo 12: Agricultural Land, Pedestrian Surveyed at five-metre interval, from northeast corner looking south



Photo 13: Artificial Pond, Permanently Wet, looking north



Photo 14: Agricultural Land, Pedestrian Surveyed at five-metre interval, work photo looking west



Photo 15: Agricultural Land, Pedestrian Surveyed at five-metre interval, work photo looking south



Photo 16: Agricultural Land, Pedestrian Surveyed at five-metre interval, from northwest corner looking south



Photo 17: Agricultural Land, Pedestrian Surveyed at five-metre interval, from western boundary looking east



Photo 18: Agricultural Land, Pedestrian Surveyed at five-metre interval, looking south



Photo 19: Agricultural Land, Pedestrian Surveyed at five-metre interval, work photo, looking west



Photo 20: Agricultural Land, Pedestrian Surveyed at five-metre interval, from southern boundary looking east



Photo 21: Agricultural Land, Pedestrian Surveyed at five-metre interval, work photo looking west



Photo 22: Derelict Grass Area, Test Pit Surveyed at five-metre intervals, looking north



Photo 23: Sample Test Pit



Photo 24: Sample Test Pit



Photo 25: Sample Test Pit



9.2 Artifact Photos

Plate 1: Chipping detritus, from Isolated Findspot and P1 (AgGw-209); Cat #1 top left; Cat #2 top right; Cat #22 bottom - Isolate



Plate 2: Chipping detritus, from P1 (AgGw-209); Cat #4 top left; Cat #5 top right; at #10 bottom left; Cat #17 bottom right



Plate 3: Projectile Point from P2 (AgGw-210) Cat #2



Plate 9: Scraper, from P3 (AgGw-211). Cat #12



Plate 4: Chipping detritus, from P4 (AgGw-212); Cat #10



Plate 5: Scraper, from P4 (AgGw-212). Cat #14



Plate 6: Chipping detritus, from P4 (AgGw-212). Cat #17



Plate 7: Biface, from P4 (AgGw-212). Cat #19



Plate 8: Chipping detritus, from P4 (AgGw-212). Cat #22



Plate 10: Biface, from P4 (AgGw-212). Cat #28



Plate 11: Scraper, from P4 (AgGw-212). Cat #29 scraper



Plate 12: Chipping detritus, from P5 (AgGw-213). Cat #13



Plate 14: Core, from P6 (AgGw-214). Cat #6



Plate 15: Biface fragment, from P6 (AgGw-214). Cat #8



Plate 12: Point fragment, from P7 (AgGw-215). Cat #1



Plate 13: Haldimand Flake fragment, from P7 (AgGw-215). Cat #6



10.0 Appendix

10.1 Artifact Catalogue

10.1.1 P1 (AgGw-209) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
3	FS3	chipping detritus	1	Selkirk	fragment	
4	FS4	chipping detritus	1	Selkirk	secondary	
5	FS5	chipping detritus	1	Selkirk	secondary	
6	FS6	chipping detritus	1	Selkirk	secondary	
7	FS7	chipping detritus	1	Selkirk	fragment	
8	FS8	chipping detritus	1	Selkirk	fragment	
9	FS9	chipping detritus	1	Onondaga	secondary	
10	FS10	chipping detritus	1	Selkirk	secondary	
11	FS11	chipping detritus	1	Onondaga	shatter	
12	FS12	chipping detritus	1	Selkirk	secondary	
13	FS13	chipping detritus	1	Selkirk	fragment	
14	FS14	chipping detritus	1	Selkirk	secondary	
15	FS15	chipping detritus	1	Selkirk	fragment	
16	FS16	chipping detritus	1	Onondaga	secondary	
17	FS17	chipping detritus	1	Onondaga	secondary	
18	FS18	chipping detritus	1	Selkirk	fragment	
19	FS19	chipping detritus	1	Onondaga	fragment	
20	FS20	chipping detritus	1	Selkirk	secondary	
21	FS21	chipping detritus	1	Selkirk	fragment	equivocal low-quality material

10.1.2 P2 (AgGw-210) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS22	chipping detritus	1	Haldimand	fragment	
2	FS23	projectile point	1	Onondaga	-	Notched projectile point missing most of the base; irregular shape with a nearly straight edge and a convex edge; might be a Stanley point dating to the Middle Archaic

10.1.3 P3 (AgGw-211) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS41	chipping detritus	1	Onondaga	tool thinning	
2	FS42	chipping detritus	1	Onondaga	fragment	
3	FS43	chipping detritus	3	Onondaga	tool thinning	
4	FS43	chipping detritus	1	Onondaga	fragment	
5	FS44	chipping detritus	1	Onondaga	tool thinning	
6	FS44	chipping detritus	1	Haldimand	fragment	
7	FS45	chipping detritus	3	Onondaga	secondary	
8	FS46	chipping detritus	1	Ancaster	shatter	
9	FS47	chipping detritus	1	Onondaga	tool thinning	
10	FS48	chipping detritus	1	Haldimand	fragment	
11	FS49	chipping detritus	1	Onondaga	fragment	
12	FS50	scraper	1	Onondaga	-	unifacially reduced large secondary flake with steep retouch along one margin forming a side-scraper; might be a fragment from a split biface

10.1.4 P4 (AgGw-212) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS51	chipping detritus	1	Onondaga	fragment	
2	FS52	chipping detritus	1	Onondaga	fragment	
3	FS53	chipping detritus	1	Onondaga	secondary	

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
4	FS54	biface	1	Onondaga	-	middle stage biface distal fragment with alternating percussion flake scars
5	FS55	scraper	1	Onondaga	-	piece of shatter with steep unifacial retouch along one margin suggestive of use as an end-scraper

10.1.5 P5 (AgGw-213) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS65	chipping detritus	1	Onondaga	fragment	
2	FS66	chipping detritus	1	Haldimand	fragment	
3	FS67	chipping detritus	2	Onondaga	secondary	
4	FS67	chipping detritus	1	Onondaga	fragment	
5	FS68	chipping detritus	1	Onondaga	tool thinning	
6	FS68	chipping detritus	1	Onondaga	secondary	
7	FS69	chipping detritus	1	Onondaga	tool thinning	
8	FS70	chipping detritus	1	Onondaga	tool thinning	
9	FS70	chipping detritus	1	Onondaga	fragment	
10	FS71	chipping detritus	1	Haldimand	fragment	
11	FS72	chipping detritus	1	Onondaga	tool thinning	potlidded
12	FS73	chipping detritus	1	Onondaga	fragment	
13	FS74	chipping detritus	1	Ancaster	fragment	
14	FS75	chipping detritus	1	Ancaster	secondary	

10.1.6 P6 (AgGw-214) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS82	chipping detritus	2	Onondaga	tool thinning	
2	FS83	chipping detritus	1	Onondaga	shatter	possible potlidded
3	FS84	chipping detritus	3	Onondaga	tool thinning	
4	FS85	chipping detritus	1	Onondaga	tool thinning	

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
5	FS86	chipping detritus	1	Onondaga	fragment	
6	FS87	core	1	Onondaga	-	amorphous core fragment with large percussion scars propagating from multiple angles; one edge might have some use-wear or evidence of platform preparation
7	FS88	chipping detritus	1	Onondaga	shatter	
8	FS89	biface	1	Onondaga	-	early-stage bifacial edge fragment
9	FS90	chipping detritus	1	Onondaga	secondary	
10	FS91	chipping detritus	1	Onondaga	tool thinning	
11	FS92	chipping detritus	1	Onondaga	secondary	
12	FS93	chipping detritus	1	Onondaga	fragment	potlidded
13	FS94	chipping detritus	2	Onondaga	fragment	
14	FS94	chipping detritus	1	Onondaga	tool thinning	
15	FS95	chipping detritus	1	Onondaga	tool thinning	
16	FS96	chipping detritus	1	Onondaga	shatter	
17	FS97	chipping detritus	2	Selkirk	fragment	
18	FS98	chipping detritus	1	Ancaster	fragment	microflake
19	FS99	chipping detritus	1	Onondaga	shatter	
20	FS100	chipping detritus	1	Ancaster	shatter	
21	FS101	chipping detritus	1	Onondaga	fragment	

10.1.7 P7 (AgGw-215) Stage 2 Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS76	point	1	Onondaga	-	projectile point medial fragment missing the tip and base; relatively thick, shows numerous step fractures and one margin is curved all suggesting it broke during manufacture
2	FS77	chipping detritus	1	Haldimand	fragment	
3	FS78	chipping detritus	1	Ancaster	fragment	
4	FS79	chipping detritus	1	Onondaga	secondary	
5	FS80	chipping detritus	1	Ancaster	primary	

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
6	FS81	chipping detritus	1	Haldimand	fragment	

10.1.8: Isolated Findspot Artifact Catalogue

Cat#	Findspot #	Artifact	Frequency	Chert Type	Morphology	Comments
1	FS1	chipping detritus	1	Onondaga	fragment	equivocal
2	FS2	chipping detritus	1	Haldimand	fragment	equivocal