ARCHAEOLOGY | HERITAGE | OUTREACH | CONSERVATION

DRAFT

Stage 1 and 2 Archaeological Assessments, Warehouse and Logistics Facility, 3027 Cedar Creek Road, Parts 1–2, Registered Plan 58R-12355, Township of North Dumfries, Regional Municipality of Waterloo, Part of Lot 34, Concession 10, Geographic Township of North Dumfries, Former Waterloo County, Ontario

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Original Report

EXECUTIVE SUMMARY

Under a contract awarded in July 2024, Archaeological Research Associates Ltd. carried out Stage 1 and 2 assessments of lands with the potential to be impacted by the development of a warehouse and logistics facility (truck terminal) at 3027 Cedar Creek Road in the Township of North Dumfries, Regional Municipality of Waterloo, Ontario. The project consists of a terminal building with 24 bays, 33 vehicular parking spaces, 242 trailer parking spaces, 39 tractor parking spaces and a stormwater management facility. The assessments were carried out in support of a Zoning By-law Amendment application and were triggered by the requirements set out in Section 4.6 of the Provincial Planning Statement, 2024 issued under Section 3 of the Planning Act. This report documents the background research and fieldwork involved in the investigation and presents conclusions and recommendations pertaining to archaeological concerns.

The Stage 1 and 2 assessments were conducted between November 2024 and May 2025 under Project Information Form #P1146-0037-2024. The investigation encompassed the area to be rezoned (Zone 11 – Industrial) and the residual portion of the western field. The residual portion of the field was surveyed to confirm that it did not contain any archaeological resources that could affect the project. Permission to enter and conduct all necessary fieldwork activities was granted by the proponent. At the time of assessment, the project area consisted of the extant structures and driveway, agricultural fields and various grassed, overgrown and wooded lands.

The Stage 1 assessment determined that the project area comprised a mixture of areas of archaeological potential and areas of no archaeological potential. The Stage 2 assessment resulted in the identification of 13 locations of archaeological materials: Sites 1 (AhHc-434), 2, 3 (AhHc-435), 6 (AhHc-436), 11–13, 14 (AhHc-437), 15, 16 (AhHc-438), 17 (AhHc-439), 22 and 24. These deposits consisted of a variety of Indigenous artifact scatters and findspots. Insufficient archaeological resources were found during the initial survey at Sites 1, 2 and 24 to meet the criteria for continuing to Stage 3, and the proponent did not permit any intensified survey coverage. Sites 1, 2 and 24 were found to be of further cultural heritage value or interest (CHVI) based on professional judgement. Sites 3, 6, 11–17 and 22 were found to be of no further CHVI.

It is recommended that Sites 1, 2 and 24 be subject to a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 Standards and Guidelines for Consultant Archaeologists. The remainder of the property was not assessed and would require further assessment in advance of any future land alterations. Potential modelling and recommendations for the balance of the property would be addressed as part of the associated project.

While the investigation involved fulsome and meaningful engagement with the participating First Nations and Indigenous communities, archaeology is only one of many aspects of interest pertaining to their ongoing stewardship of treaty and traditional territories. The engaged Indigenous groups will be provided with the report for consideration and comment, and any concerns will be addressed prior to submission.

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ABBREVIATIONS

ARA – Archaeological Research Associates Ltd.
CHVI – Cultural Heritage Value or Interest
CIF – Contract Information Form
MCM – Ministry of Citizenship and Multiculturalism
PIF – Project Information Form
PTP – Positive Test Pit
S&Gs – Standards and Guidelines for Consultant Archaeologists
SD – Supplementary Documentation

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1.0 PROJECT CONTEXT

1.1 Development Context

Under a contract awarded in July 2024, Archaeological Research Associates Ltd. (ARA) carried out Stage 1 and 2 assessments of lands with the potential to be impacted by the development of a warehouse and logistics facility (truck terminal) at 3027 Cedar Creek Road in the Township of North Dumfries, Regional Municipality of Waterloo, Ontario. The project consists of a terminal building with 24 bays, 33 vehicular parking spaces, 242 trailer parking spaces, 39 tractor parking spaces and a stormwater management facility. The assessments were carried out in support of a Zoning By-law Amendment application and were triggered by the requirements set out in Section 4.6 of the Provincial Planning Statement, 2024 issued under Section 3 of the Planning Act. This report documents the background research and fieldwork involved in the investigation and presents conclusions and recommendations pertaining to archaeological concerns.

The project area consists of an irregularly shaped parcel of land with an area of 9.25 ha (Map 1). This parcel is generally bounded by Cedar Creek Road to the north, the Unilock Ltd. property to the east, Highway 401 to the south and a mixture of grassed and wooded lands to the west. The project area is situated within the northeastern part of the greater property, which has a total area of 21.28 ha. In legal terms, the property comprises Parts 1–2, Registered Plan 58R-12355, which fall on part of Lot 34, Concession 10 in the Geographic Township of North Dumfries, former Waterloo County.

The Crown obtained these lands from the Mississaugas as part of a much larger purchase in 1784, but there were uncertainties relating to the area involved. The extent of the cession was clarified during the Between the Lakes Purchase (Treaty 3) in 1792. The Haldimand Proclamation of 1784 granted a tract of land along the Grand River to Six Nations, and the clarifying Simcoe Patent (Treaty 4) was issued in 1793. This area is also located within the lands involved in the 1701 Albany Deed (Nanfan Treaty) between the Five Nations of the Haudenosaunee Confederacy and the Crown. Although the Crown’s official recognition of the Nanfan Treaty remains inconsistent, the fact that this area comprises part of the traditional territory of the Haudenosaunee cannot be disputed. In addition to being important historical documents, treaties are enduring and binding agreements that continue to inform relationships, stewardship expectations and procedural fairness today. Beyond these treaty contexts, the subject lands fall within the Grand River watershed, which is a living cultural-political landscape for Six Nations under the Haldimand Proclamation. Given the location of the project area, engagement with Mississauga and Haudenosaunee peoples was undertaken to collaboratively mitigate impacts on their rights and foster successful partnerships.

The Stage 1 and 2 assessments were conducted between November 2024 and May 2025 under Project Information Form (PIF) #P1146-0037-2024. The investigation encompassed the area to be rezoned (Zone 11 – Industrial) and the residual portion of the western field. The residual portion of the field was surveyed to confirm that it did not contain any archaeological resources that could affect the project. The remaining

12.01 ha of the property was not assessed as part of this investigation. Permission to enter and conduct all necessary fieldwork activities was granted by the proponent.

As set out in Section 1.0 and Section 2.0 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&Gs), the investigation was carried out to achieve the following objectives:

- Provide information about geography, history and current land conditions;
- Determine whether any previous archaeological fieldwork has been completed;
- Evaluate in detail the project area's archaeological potential;
- Document all archaeological resources within the project area;
- Determine whether there are sites requiring further assessment; and
- Recommend appropriate strategies for Stage 3 assessment, if necessary.

The Ministry of Citizenship and Multiculturalism (MCM) is asked to review the results and recommendations presented herein and enter the report into the Ontario Public Register of Archaeological Reports. A Record of Indigenous Engagement is included in the project report package in accordance with the requirements set out in Section 7.6.2 of the 2011 S&Gs. The additional directions provided in the 2018 Mississaugas of the Credit First Nation Standards and Guidelines for Archaeology were considered throughout the investigation.

1.2 Historical Context

The vicinity of the project area is characterized by an extensive body of Indigenous history pertaining to the Pre-Contact period and intertwined Indigenous and Euro-Canadian histories from the ensuing Post-Contact period. Section 1.2.1 summarizes the region's settlement history and Section 0 documents past and present land uses. Two previous archaeological reports containing relevant background information were obtained during the research component of the study. These reports are summarized in Section 1.3.3, and the references appear in Section 8.0.

1.2.1 Settlement History

1.2.1.1 Pre-Contact

The Pre-Contact history of the region is lengthy and rich, and a variety of Indigenous groups inhabited the landscape. Archaeologists generally divide this history into three main periods: Palaeo, Archaic and Woodland. Each period comprises a range of sub-periods characterized by identifiable trends in material culture and settlement patterns, which are used to interpret past lifeways. The principal characteristics of these sub-periods are summarized in Table 1.

Table 1: Pre-Contact Settlement History

(Ellis and Ferris 1990; Munson and Jamieson 2013; Warrick 2000; Wright 1972)

Sub-Period	Timeframe	Characteristics
Early Palaeo	9500–8400 BC	Gainey, Barnes and Crowfield traditions; Characterized by small bands; Mobile hunters and gatherers; Seasonal resources and large territories were utilized; Fluted points
Late Palaeo	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate traditions; Continuing mobility; Campsites/waystations were more prevalent; Smaller territories were utilized; Non-fluted points
Early Archaic	7500–6000 BC	Side-Notched, Corner-Notched (Nettling, Thebes) and Bifurcate traditions; Growing diversity of stone tool types; Heavy woodworking tools appeared (e.g., ground stone axes and chisels)
Middle Archaic	6000–2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton Side- and Corner-Notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools produced; Net-sinkers common; Earliest copper tools
Late Archaic	2500–900 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appeared; Stone pipes emerged; Characterized by long-distance trade (marine shells and galena)
Early Woodland	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerged; Meadowood cache blades and side-notched points; Bands consisted of up to 35 people
Middle Woodland	400 BC–AD 600	Point Peninsula tradition; Vinette 2 ceramics appeared; Small campsites and seasonal village sites; Influences from northern Ontario and Hopewell area to the south; Hopewellian influence resulted in the continued use of burial mounds
Middle/Late Woodland Transition	AD 600–900	Princess Point tradition; Cord roughening, impressed lines and punctate designs on pottery; Adoption of maize horticulture at the western end of Lake Ontario; Oval houses and ‘incipient’ longhouses; First palisades; Villages with 75 people
Late Woodland	AD 900–1600	Algonquian-speaking Anishinaabeg and Iroquoian-speaking peoples such as the Pre-Contact Neutral occupied the area; Early focus on the latter linguistic group identified Glen Meyer, Uren, Middleport and later traditions and emphasized a linear ‘Iroquoian’ developmental sequence; There was likely a close interaction sphere between the two groups, which may have resulted in shared material culture traditions; Pre-Contact Neutral associated with large villages; Some up to 5 ha with 2,500 people; Extensive croplands; Also hamlets, cabins, camps and cemeteries; Fur trade begins ca. 1580; European trade goods appeared

While it is true that Iroquoian-speaking peoples tended to leave a much more obvious mark on the archaeological record during the Late Woodland period, Algonquian-speaking peoples were also present throughout southern Ontario. Due to the sustainability of their lifeways, Anishinaabeg sites are generally less recognizable than those associated with the more sedentary agriculturalists. Many artifact scatters in southern Ontario represent campsites or processing areas associated with the more mobile Anishinaabeg, utilized during their travels along the local drainage basins while making use of seasonal resources. This part of southern Ontario represents the ancestral territory of various Indigenous groups, each with their own land use and settlement pattern tendencies.

1.2.1.2 Post-Contact

The arrival of European explorers and traders at the beginning of the 17th century triggered widespread shifts in Indigenous lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

Table 2: Post-Contact Settlement History

(AO 2025; Coyne 1895; Cumming 1972; Ellis and Ferris 1990; Hayes 1997; Janusas 1988; Lajeunesse 1960; Smith 1846; Surtees 1994; Sutherland 1864)

Historical Event	Timeframe	Characteristics
Early Exploration	Early 17th century	Brûlé explored southern Ontario in 1610/11; Champlain travelled through in 1613 and 1615/1616, making contact with a number of Indigenous groups (including the Algonquin, Wendat and other First Nations); European trade goods became increasingly common and began to put pressure on traditional industries
Increased Contact and Conflict	Mid- to late 17th century	Conflicts between various First Nations during the Beaver Wars resulted in numerous population shifts, including the dispersal of the Wendat; Other First Nations actively occupied the area; European explorers continued to document the area, and many Indigenous groups traded directly with the French and English; 'The Great Peace of Montreal' treaty established between roughly 39 different First Nations and New France in 1701
Fur Trade Development	Early to mid-18th century	Growth and spread of the fur trade with the Mississauga, Haudenosaunee and other First Nations; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years' War in 1754; French surrender in 1760
British Control	Mid- to late 18th century	Royal Proclamation of 1763 recognized the title of the First Nations to the land; Numerous treaties subsequently arranged by the Crown; First land cession under the new protocols was the Treaty of Niagara in 1764, which involved the surrender of a strip of land on the west side of the Niagara River by the Seneca; The Niagara Purchase (Treaty 381) in 1781 included this area
Loyalist Influx	Late 18th century	United Empire Loyalist influx after the American Revolutionary War (1775–1783); British developed interior communication routes and acquired additional lands; Between the Lakes Purchase completed with the Mississaugas in 1784 and confirmed in 1792 (Treaty 3); The Haldimand Proclamation of 1784 granted land to Six Nations (the Haldimand Tract), which was clarified by the Simcoe Patent (Treaty 4) in 1793; Constitutional Act of 1791 created Upper and Lower Canada
County Development	Late 18th to early 19th century	Became part of York County's 'West Riding' in 1792; In 1798, J. Brant surrendered Blocks 1–6 of the Haldimand Tract 'In Trust' to the Crown, but payments to Six Nations were sporadic; Part of the Gore District and Halton County in 1816; Wellington District and Waterloo County created in 1840; Waterloo County became independent after the abolition of the district system in 1849

Historical Event	Timeframe	Characteristics
Township Formation	Early 19th century	North Dumfries originally part of Block 1 of the Haldimand Tract; Block 1 purchased by P. Stedman in 1798; Six Nations requested the return of Block 1 after Stedman's death, but it was not returned; Dumfries acquired by W. Dickson in 1816, and A. Marlett surveyed it that year; Funds were not credited to Six Nations; Early settlers in North Dumfries included the Shades, Frasers, McBeans, Mackenzies, Buchanans, Carricks, Harvies, McArthurs and McColls; Only 163 people in all of Dumfries by 1818 (the majority in the south); Rate of settlement increased after 1825
Township Development	Mid-19th to early 20th century	By 1846, there were 7 grist mills and 16 saw mills in all of Dumfries; North and South Dumfries divided between Waterloo and Brant Counties ca. 1850; Traversed by the Great Western Railway's Galt Branch (1854), the Galt & Guelph Railway (1855), the Grand Trunk Railway's Doon Branch (1873), the Credit Valley Railway (1879/81), the Galt, Preston & Hespeler Street Railway (1894/95 and 1905), the Grand Valley Railway (1904) and the Lake Erie & Northern Railway (1916); Largest settlements included Ayr (Mudge's Mill) and Galt (Shade's Mill); Smaller communities at Branchton, Greenfield (formerly Greenfield Mills), Reidsville, Roseville and Whistlebare

Although this summary emphasizes major events associated with the Euro-Canadian occupation of this part of southern Ontario, it is critical to note that Mississauga and Haudenosaunee peoples have enduring relationships with the lands, waters and resources within their treaty and traditional territories. The Mississauga and Haudenosaunee have exercised stewardship in the region for centuries, and they continue to do so in contemporary times. For the Haudenosaunee, the ongoing continuity of their governance and procedural relationships is reflected in the Covenant Chain with the Crown, the Treaty of Niagara (1764) and the Haldimand Proclamation (1784). The Treaty of Niagara extended the Covenant Chain to include First Nations beyond the Haudenosaunee, including Algonquin, Chippewa, Mississauga, Odawa and Wendat peoples. Indigenous presence in the area did not conclude with Euro-Canadian settlement, and strong governance has resulted in the perpetual care and maintenance of the land, peoples and communities therein.

1.2.2 Past and Present Land Use

1.2.2.1 Overview

During Pre-Contact and Early Contact times, the vicinity of the project area would have comprised a mixture of coniferous trees, deciduous trees and open areas. Indigenous communities actively utilized the land and its resources well into Post-Contact times, and they would have managed the landscape to varying degrees (e.g., establishing clearings for campsites, plant cultivation, etc.). During the early 19th century, Euro-Canadian settlers arrived in the area and began to clear the forests for agricultural and settlement purposes. The project area was located southeast of the historical limits of Roseville. The land use at the time of assessment can be classified as agricultural.

1.2.2.2 Mapping and Imagery Analysis

In order to gain a general understanding of the project area's past land uses, two historical settlement maps, one topographic map and one aerial image were examined during the research component of the study. Specifically, the following resources were consulted:

- Tremaine's Map of the County of Waterloo, Canada West (1861) (OHCMP 2025);
- Illustrated Historical Atlas of the County of Waterloo, Ont. (1881) (MU 2001);
- A topographic map from 1916 (OCUL 2025); and
- An aerial image from 1954 (U of T 2025).

The limits of the project area are shown on georeferenced versions of the consulted historical resources in Map 2–Map 5.

Tremaine's Map of the County of Waterloo, Canada West (1861) indicates that the project area traversed lands occupied by Thomas Kerr in the north and John McNab in the south (Map 2). The Kerr farmhouse is not shown, but the McNab farmhouse appears to the south along Alps Road. The Illustrated Historical Atlas of the County of Waterloo, Ont. (1881) does not identify any occupants or structures within the project area, but this publication only included information for its subscribers (Map 3). The topographic map from 1916 suggests that the project area comprised wooded lands and cleared lands to either side of a tributary of Eden Creek (Map 4). The aerial image from 1954 confirms that the project area consisted of a series of agricultural fields separated by hedgerows and a small pocket of wooded lands (Map 5).

1.3 Archaeological Context

The Stage 1 and 2 assessments were conducted concurrently between November 26, 2024, and May 28, 2025, under PIF #P1146-0037-2024. ARA utilized an Emlid Reach RX GNSS receiver with RTK correction providing a precision of 1 cm during the investigation (UTM17/NAD83). The limits of the project area were confirmed using GIS data translated into GPS points for reference in the field, in combination with aerial imagery showing physical features in relation to the subject lands.

The archaeological context of any given project area must be informed by 1) the condition of the property as found (Section 1.3.1), 2) a summary of registered or known archaeological sites located within a minimum 1 km radius (Section 1.3.2) and 3) descriptions of previous archaeological fieldwork carried out within or immediately adjacent to the property (Section 1.3.3).

1.3.1 Condition of the Property

The project area lies within the deciduous forest, which is the southernmost forest region in Ontario and is dominated by agricultural and urban areas. This region is characterized by scattered woodlots in areas unsuitable for agriculture, and the forest generally has the greatest diversity of tree species while at the same time having the

lowest proportion of cover. It has most of the trees and shrubs found in the Great Lakes–St. Lawrence forest and also contains black walnut, butternut, tulip, magnolia, black gum, many types of oaks, hickories, sassafras and red bud (MNR 2025).

In terms of local physiography, the subject lands fall within the Waterloo Hills. This region consists mainly of sandy hills, including ridges of sandy till (unsorted glacial sediment), kames and kame moraines (large deposits of till, sand and gravel left after melting). Outwash sands occupy the hollows between the hills. An extensive area of alluvial terraces adjoins the hilly region, which are associated with the Grand River spillway system (Chapman and Putnam 1984:136–137).

According to the Ontario Soil Survey, the project area is located within a map unit that contains Brady sandy loam, Fox sandy loam and Lisbon sandy loam (Map 6). The characteristics of these soils are summarized in Table 3 (Presant and Wicklund 1971; Cressman 1996:Sheet 3).

Table 3: Soil Types

Soil Code	Soil Type	Parent Materials	Drainage
By	Brady sandy loam	Outwash and shallow lacustrine medium and coarse sand	Imperfect
Fo	Fox sandy loam	Outwash and shallow lacustrine medium and coarse sand	Good
Li	Lisbon sandy loam	Outwash gravelly sandy loam	Good

The subject lands fall within the Eden Creek drainage basin, which is under the jurisdiction of the Grand River Conservation Authority (GRCA 2024). Specifically, the project area is located 30 m north of two unnamed wetlands and 80 m north of a tributary of Eden Creek. It should be noted that Indigenous peoples continue to exercise stewardship along the Grand River in the present day, especially in terms of the potential cumulative effects that development projects could have on the watershed.

At the time of assessment, the project area consisted of the extant structures and driveway, agricultural fields and various grassed, overgrown and wooded lands. Soil conditions were ideal for the activities conducted. No unusual physical features were encountered that affected fieldwork strategy decisions or the identification of artifacts or cultural features (e.g., dense root mats, boulders, rubble, etc.).

1.3.2 Registered or Known Archaeological Sites

The Ontario Archaeological Sites Database and the Ontario Public Register of Archaeological Reports were consulted to determine whether any registered or known archaeological resources occur within a 1 km radius of the project area. The available search facility returned 43 registered sites located within at least a 1 km radius (the facility returns sites in a rectangular area, rather than a radius, potentially resulting in results beyond the specified distance). No unregistered sites were identified within a 1 km radius of the project area. The sites are summarized in Table 4.

Table 4: Registered or Known Archaeological Sites

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Project Area
AhHc-6	Dry Lake	Woodland, Late	Indigenous	Village	> 1 km
AhHc-13	Cedar	Unspecified	Unspecified	Unspecified	300 m–1 km
AhHc-51	Boida 2	Woodland, Early	Indigenous	Findspot	> 1 km
AhHc-61	Black Horse Corners	Post-Contact	Euro-Canadian	Hamlet	> 1 km
AhHc-123	Barber	Woodland, Middle	Indigenous	Scatter	> 1 km
AhHc-140	Cedar Creek Location 1	Pre-Contact	Indigenous	Scatter	300 m–1 km
AhHc-252	-	Pre-Contact	Indigenous	Scatter	300 m–1 km
AhHc-253	-	Pre-Contact	Indigenous	Scatter	300 m–1 km
AhHc-263	Site 4	Pre-Contact	Indigenous	Unknown	300 m–1 km
AhHc-264	Bridge	Archaic, Early, Woodland, Late	Indigenous	Camp / campsite	300 m–1 km
AhHc-267	Whale	Archaic, Late	Indigenous	Unknown	> 1 km
AhHc-268	Swan	Pre-Contact	Indigenous	Unknown	> 1 km
AhHc-269	Phoenix	Pre-Contact	Indigenous	Unknown	> 1 km
AhHc-270	Hedge	Pre-Contact	Indigenous	Camp / campsite	300 m–1 km
AhHc-271	Osprey	Archaic, Late	Indigenous	Unknown	50 m–300 m
AhHc-272	Green Leaf	Pre-Contact	Indigenous	Unknown	50 m–300 m
AhHc-273	Blue Jay	Woodland, Late	Indigenous	Camp / campsite	300 m–1 km
AhHc-274	Wet River	Woodland, Middle	Indigenous	Camp / campsite	> 1 km
AhHc-275	Beaver	Archaic, Late	Indigenous	Unknown	> 1 km
AhHc-276	Sol	Woodland, Middle	Indigenous	Camp / campsite	> 1 km
AhHc-277	Luna	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-278	Wave	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-279	Star	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-280	Zeus	Woodland, Late	Indigenous	Camp / campsite	300 m–1 km
AhHc-281	Cove	Archaic, Early	Indigenous	Unknown	300 m–1 km
AhHc-282	Edge	Archaic	Indigenous	Unknown	300 m–1 km
AhHc-283	Mist	Archaic	Indigenous	Camp / campsite	300 m–1 km
AhHc-285	Rim	Archaic, Early	Indigenous	Unknown	300 m–1 km
AhHc-286	Wood	Archaic, Early	Indigenous	Unknown	300 m–1 km
AhHc-287	Bowser	Archaic, Late	Indigenous	Camp / campsite	300 m–1 km
AhHc-288	Ladybug	Post-Contact, Pre-Contact	Indigenous, Euro-Canadian	Unknown	> 1 km
AhHc-289	Lobster	Archaic, Early	Indigenous	Unknown	> 1 km
AhHc-290	Heron	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-291	Leopold	Pre-Contact	Indigenous	Unknown	> 1 km
AhHc-292	Lynx	Archaic, Early	Indigenous	Unknown	> 1 km

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Project Area
AhHc-293	Horn	Woodland, Late	Indigenous	Unknown	> 1 km
AhHc-294	Dawn	Archaic, Early	Indigenous	Unknown	> 1 km
AhHc-295	Dusk	Archaic, Middle	Indigenous	Unknown	> 1 km
AhHc-296	Elephant	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-297	Rattlesnake	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-298	Valley	Pre-Contact	Indigenous	Camp / campsite	> 1 km
AhHc-299	Edge	Pre-Contact	Indigenous	Camp / campsite	300 m–1 km
AhHc-300	Wood	Pre-Contact	Indigenous	Camp / campsite	300 m–1 km

None of these previously identified sites are located within or immediately adjacent to the project area. The Osprey (AhHc-271) and Green Leaf (AhHc-272) sites are located within 300 m of the project area, however, and must be considered as relevant features of archaeological potential. The remaining sites represent more distant archaeological resources.

1.3.3 Previous Archaeological Work

Reports documenting assessments conducted within the subject lands and assessments that resulted in the discovery of sites within adjacent lands were sought during the research component of the study. In order to ensure that all relevant past work was identified, an investigation was launched to identify reports involving assessments within 50 m of the project area. The investigation determined that there are two available reports documenting previous archaeological fieldwork within the specified distance. The relevant results and recommendations are summarized below as required by Section 7.5.8 Standards 4–5 of the 2011 S&Gs.

1.3.3.1 Highway 401 Widening (Stage 1–2)

In May 2001, Stage 1 and 2 assessments were carried out for the widening of a 7.8 km segment of Highway 401 from west of Cedar Creek Road to west of Homer Watson Boulevard under Contract Information Form (CIF) #2001-010-003 (FAC 2001). The assessed area falls within 50 m of the southeastern part of the project area. The investigation resulted in the identification of four locations of archaeological materials, none of which are within adjacent lands. It was recommended that the four locations be subject to a Stage 3 assessment (FAC 2001:24).

1.3.3.2 Highway 401 Improvements (Stage 1–2)

Stage 1 and 2 assessments were carried out for the Highway 401 and Waterloo Regional Road 97 (Cedar Creek Road) Underpass Replacement and Improvements project in June 2017 under PIF #P018-0870-2017 (NDA 2017). The assessed area falls within 50 m of the southeastern part of the project area. The investigation also resulted in the identification of four locations of archaeological materials, none of which are

within adjacent lands. Site 4 (AhHc-263) was found to be of further CHVI, and it was as recommended that the site be subject to a Stage 3 assessment (NDA 2017:12).

2.0 STAGE 1 BACKGROUND STUDY

2.1 Background

The Stage 1 assessment involved background research to document the geography, history, previous archaeological fieldwork and current land condition of the assessed portion of the project area. This desktop examination included research from archival sources, archaeological publications and online databases. It also included the analysis of a variety of historical maps and aerial imagery. The results of the research conducted for the background study are summarized below.

The vicinity of the project area is characterized by complex Pre-Contact and Post-Contact histories (Section 1.2.1). Artifacts associated with Palaeo, Archaic, Woodland and Early Contact traditions are well attested in the Regional Municipality of Waterloo, and early Euro-Canadian archaeological sites are likewise common. The presence of 43 previously identified sites in the surrounding area demonstrates the desirability of this locality for early settlement (Section 1.3.2). The investigation confirmed that none of these sites extend into the subject lands. Background research did not identify any areas of previous assessment within the project area (Section 1.3.3).

The natural environment of the project area would have been attractive to both Indigenous and Euro-Canadian populations as a result of proximity to an unnamed pond and two tributaries of Eden Creek. The soils would have been ideal for agriculture, and the diverse local vegetation would also have encouraged settlement throughout Ontario's lengthy history. Euro-Canadian populations would have been particularly drawn to the adjacent historical roadway.

In summary, the background study included an up-to-date listing of sites from the Ontario Archaeological Sites Database (within at least a 1 km radius), the consideration of previous local archaeological fieldwork (within at least a 50 m radius), the analysis of historical maps (at the most detailed scale available) and the study of aerial imagery. ARA therefore confirms that the standards for background research set out in Section 1.1 of the 2011 S&Gs were met.

2.2 Field Methods (Property Inspection)

The Stage 1 and 2 assessments were carried out concurrently, and a separate property inspection did not occur. Instead, the visual inspection was conducted over the course of the property survey in keeping with Section 2.1 Standards 2a–b of the 2011 S&Gs. The specific field methods and environmental conditions at the time of assessment are summarized in Section 3.1.

2.3 Analysis and Conclusions

In addition to relevant historical sources and the results of past archaeological assessments, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Section 1.3.1 of the 2011 S&Gs recognizes

the following features or characteristics as indicators of archaeological potential: previously identified sites, water sources (past and present), elevated topography, pockets of well-drained sandy soil, distinctive land formations, resource areas, areas of Euro-Canadian settlement, early transportation routes, listed or designated properties, historic landmarks or sites, and areas that local histories or informants have identified with possible sites, events, activities or occupations.

The Stage 1 assessment resulted in the identification of several features of archaeological potential in the vicinity of the project area (Map 7; SD Map 1). The closest and most relevant indicators of archaeological potential (i.e., those that would affect survey interval requirements) include two previously identified sites (AhHc-271 and AhHc-272), multiple primary water sources (a pond and tributaries of Eden Creek), multiple secondary water sources (unnamed wetlands) and one historical roadway (Cedar Creek Road). Background research did not identify any features indicating that the project area had potential for deeply buried archaeological resources.

Although proximity to a feature of archaeological potential is a significant factor in the potential modelling process, current land conditions must also be considered. Section 1.3.2 of the 2011 S&Gs emphasizes that 1) quarrying, 2) major landscaping involving grading below topsoil, 3) building footprints and 4) sewage/infrastructure development can result in the removal of archaeological potential, and Section 2.1 states that 1) permanently wet areas, 2) exposed bedrock and 3) steep slopes (> 20°) in areas unlikely to contain pictographs or petroglyphs can also be evaluated as having no or low archaeological potential. Areas previously assessed and not recommended for further work also require no further assessment.

Background research did not identify any previously assessed areas of no further concern within the project area. ARA's visual inspection, coupled with the analysis of historical sources and digital environmental data, resulted in the identification of several areas of no archaeological potential. Since these areas of no archaeological potential were identified over the course of the property survey, they are fully discussed in Section 3.1. The remainder of the project area had archaeological potential and required further assessment.

3.0 STAGE 2 PROPERTY ASSESSMENT

3.1 Field Methods

The Stage 2 assessment involved visual inspection, pedestrian survey and test pit survey. Weather and lighting conditions were ideal during the investigation, permitting good visibility of land features. A breakdown of the specific fieldwork activities and environmental conditions appears in Table 5. ARA therefore confirms that fieldwork was carried out under weather and lighting conditions that met the requirements set out in Section 1.2 Standard 2 and Section 2.1 Standard 3 of the 2011 S&Gs.

Table 5: Fieldwork Activities and Environmental Conditions

Date	Activity	Field Director	Lighting	Cloud Cover	Precipitation	Temperature (°C)
26/11/2024	Pedestrian survey, Test pit survey	JG	Diffuse	Overcast	None	5
20/05/2025	Conditions check	SC	Bright	Partial	None	11
26/05/2025	Pedestrian survey, Intensification, Test pit survey	SB	Bright	None	None	15
27/05/2025	Pedestrian survey, Intensification, Test pit survey	SB	Bright	Partial	None	20
28/05/2025	Test pit survey	SB	Bright	Overcast	None	15

The project area and its periphery were subjected to a systematic visual inspection in accordance with the requirements set out in Section 1.2 of the 2011 S&Gs. The inspection confirmed that all surficial features of archaeological potential were present where they were previously identified and did not result in the identification of any additional features of archaeological potential not visible on mapping (e.g., relic water channels, patches of well-drained soils, etc.).

The visual inspection resulted in the identification of several areas of disturbance, comprising the modified driveway and extant building footprints (Image 1–Image 3). These areas had clearly been impacted by past earth-moving/construction activities, resulting in the disturbance of the original soils to a significant depth and severe damage to the integrity of any archaeological resources. Steeply sloped lands were documented in the northwestern wooded area (Image 4). No other natural features (e.g., permanently wet lands, overgrown vegetation, heavier soils than expected, etc.) or significant built features (e.g., heritage structures, landscapes, plaques, monuments, cemeteries, etc.) that would affect assessment strategies were identified.

The pedestrian survey method was utilized to complete the assessment within the agricultural fields. These lands had been recently ploughed, the soils were appropriately weathered and at least 80% of the ploughed ground surface was visible. In accordance with the requirements set out in Section 2.1.1 of the 2011 *S&Gs*, ARA crewmembers traversed the fields along parallel transects established at a maximum interval of 5 m (Image 5–Image 8).

The pedestrian survey resulted in the identification of 10 locations of archaeological materials: Sites 3, 6, 11–17 and 22 (11 other site identifiers were provisionally assigned in the field, but the finds were amalgamated with an adjacent deposit). An intensified pedestrian survey was conducted at each site in accordance with Section 2.1.1 of the 2011 S&Gs. Survey transects were decreased to an interval of 1 m over a minimum of a 20 m radius around the finds, and this interval was continued until the full extent of each surface scatter had been defined (Image 9–Image 10). The artifact stations were recorded with a high-precision GPS receiver, and all of the artifacts were retained in order to fully document the deposits. Site relocation can be achieved using the associated GIS and mapping data.

The test pit survey method was utilized to complete the assessment the grassed, overgrown and wooded lands because ploughing was not possible or viable. Using this method, ARA crewmembers hand excavated small test pits with a minimum diameter of 30 cm at regularly spaced intervals in accordance with Section 2.1.2 of the 2011 S&Gs. Since the areas to be tested were located less than 300 m from any feature of archaeological potential, a maximum interval of 5 m was warranted (Image 11–Image 13). One narrow constraint (i.e., less than 5 m wide) was encountered during the test pit survey, comprising a band of stockpiled soils southeast of the house. Survey transects were established along the edges of this obstruction to ensure complete coverage (Image 14).

As required by Section 2.1.2 Standard 4 of the 2011 S&Gs, test pits were excavated to within 1 m of all built structures or until test pits exhibited evidence of ground disturbance. Each test pit was excavated into at least the first 5 cm of subsoil, and the resultant pits were examined for stratigraphy, potential features and/or evidence of fill. The test pits generally contained dark brown sandy loam topsoil over medium orange sandy loam subsoil. All soils were screened through mesh with an aperture of no greater than 6 mm and examined for archaeological resources.

The test pit survey resulted in the identification of three locations of archaeological materials: Sites 1, 2 and 24. Based on the initial results, it was unclear whether the sites were of further cultural heritage value or interest (CHVI). Intensified survey coverage was therefore warranted as per Section 2.1.3 of the 2011 S&Gs, but the proponent did not authorize any additional fieldwork. All artifacts were retained for review in the lab. The test pits were backfilled upon completion.

The utilized field methods are presented in Map 8–Map 9. The project area and property parcel are depicted as layers in these maps. A breakdown of field methods appears in Table 6.

Table 6: Field Methods

Category	Breakdown
Pedestrian survey at 5 m interval	82.44% (7.64 ha)
Test pit survey at 5 m interval	14.62% (1.35 ha)
Test pit survey at 10 m interval	0.00% (0.00 ha)
Test pit survey to confirm disturbance at judgemental interval	0.00% (0.00 ha)
Not surveyed due to physical constraint	0.00% (0.00 ha)

Category	Breakdown
Not surveyed due to permanently wet areas	0.00% (0.00 ha)
Not surveyed due to exposed bedrock	0.00% (0.00 ha)
Not surveyed due to sloped areas	1.85% (0.17 ha)
Not surveyed due to disturbed areas	1.10% (0.10 ha)
Total	100.00% (9.27 ha)

The identified archaeological resources were recorded on field maps, described in field notes and documented with a GPS receiver in accordance with Section 5.0 Standard 2 of the 2011 S&Gs. All maps and data revealing site location information appear in the Supplementary Documentation (SD) accompanying the report (SD Map 2–SD Map 5; SD Table 1). As required by Table 7.1, Section 7.8.2 and Section 7.8.3 of the 2011 S&Gs, the Record of Finds and Analysis and Conclusions for each site appear in Section 3.2–Section 3.10. It must be recognized that archaeological sites carry living cultural value for Indigenous peoples beyond the associated material evidence, and these intangible values require consideration along with the physical artifacts.

During laboratory processing of the retained finds, detailed analyses were carried out to provide 1) a record of the materials, 2) a basis for all recommendations and 3) enough information to help future researchers determine relevance to their studies. The finds were classified using ARA's devised typological system, which follows Nomenclature for Museum Cataloging (2025). In this system, chert types are determined as per Cherts of Southern Ontario (Eley and von Bitter 1989) and Ontario Cherts Revisited (Fox 2009), and lithics are classified using the definitions set out in Lithic Analysis (Odell 2004) and Lithics: Macroscopic Approaches to Analysis (Andrefsky 2005). Euro-Canadian artifacts are divided into classes, materials, object groups and object names using a variety of reference aids (e.g., Chenoweth 2016; Lindsey 2025; MACL 2012). The references used for artifact dating are itemized in the catalogue, and the sources cited are listed in Section 8.0. A representative sample of artifacts appears in Image 15–Image 17.

The archaeological materials are stored in polyethylene bags within Archive Box H1. This is a 30.5 x 25.4 x 38.1 cm light duty, double-bottom corrugated cardboard container labelled with its Archive Box designation. Box numbers are assigned in numerical order, and all associated information is entered in a secure digital catalogue for accurate tracking. Archive Boxes are stored on steel storage shelves at 465 Maple Avenue in Kitchener, Ontario.

3.2 Site 1 (AhHc-434)

3.2.1 Record of Finds

Site 1 was identified during the test pit survey of grassed and wooded lands northwest of the house (SD Map 4). The site consisted of a 7 x 6 m (W-E) scatter of Indigenous archaeological materials in a relatively flat area. The stratigraphic sequence comprised dark brown sandy loam topsoil (Lot 1) over medium orange sandy loam subsoil (Lot 2). The finds were from Lot 1 (n=3).

A total of three artifacts were observed within three test pits (PTPs 1–3), all of which were collected. The assemblage consisted of biface thinning flakes of Onondaga chert (n=3). The associated catalogue entries appear in Appendix A, Records 1–3. None of the artifacts exhibited evidence of heat alteration.

No cultural features or structural elements of potential CHVI were identified. No areas of artifact concentration were discernable. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.2.2 Analysis and Conclusions

The results indicate that Site 1 comprises a small deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials.

The assemblage consisted of biface thinning flakes of Onondaga chert (n=3). None of the artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The deposit was likely associated with tool maintenance.

Insufficient archaeological resources were found during the initial survey at Site 1, and the proponent did not permit any intensified survey coverage. Site 1 was found to be of further CHVI based on professional judgement. The site warrants a Stage 3 site-specific assessment, but it is unclear whether Stage 4 mitigation will be needed.

3.3 Site 3 (AhHc-435)

3.3.1 Record of Finds

Site 3 was identified during the pedestrian survey of the western agricultural field (SD Map 4). The site consisted of a 91 x 23 m (N-S) scatter of Indigenous archaeological materials in a relatively flat area.

A total of 17 artifacts were observed on the field surface, all of which were collected. The assemblage consisted of flake fragments (n=5), biface thinning flakes (n=4), edge trimming flakes (n=3), primary flakes (n=3), a piece of shatter and an end scraper of Onondaga chert. The associated catalogue entries appear in Appendix A, Records 5–21, and a supplementary analysis of the formal lithic artifact is provided in Appendix B. One primary flake and the piece of shatter exhibited evidence of heat alteration.

No cultural features or structural elements of potential CHVI were identified. Most of the artifacts were found in the southern part of the scatter, but no notable concentrations were identified. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.3.2 Analysis and Conclusions

The results indicate that Site 3 comprises a large deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was

no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The assemblage consisted of flake fragments (n=5), biface thinning flakes (n=4), edge trimming flakes (n=3), primary flakes (n=3), a piece of shatter and an end scraper of Onondaga chert. None of the artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The deposit appears to be associated with tool production, tool maintenance and resource processing.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 3 is of no further CHVI. Specifically, less than 10 non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.4 Site 6 (AhHc-436)

3.4.1 Record of Finds

Site 6 was identified during the pedestrian survey of the western agricultural field (SD Map 4). The site consisted of a 124 x 42 m (NW-SE) scatter of Indigenous archaeological materials in an area of rolling topography.

A total of 41 artifacts were observed on the field surface, all of which were collected. The assemblage consisted of lithic debitage (n=31), informal lithic artifacts (n=5) and formal lithic artifacts (n=5). The associated catalogue entries appear in Appendix A, Records 22–62. A quantitative summary is provided in Table 7.

Table 7: Site 6 – Indigenous Artifacts

Material	Object Group	Object Name	Count	%
Onondaga Chert	Lithic Debitage	Flake (Fragment)	14	34.15%
		Flake (Biface Thinning)	9	21.95%
		Flake (Edge Trimming)	3	7.32%
	Formal Lithic	Biface (Fragment)	2	4.88%
		Scraper (End)	2	4.88%
		Point (Stemmed)	1	2.44%
	Informal Lithic	Utilized Flake (Primary)	2	4.88%
		Rough Biface (Fragment)	1	2.44%
		Utilized Flake (Fragment)	1	2.44%
Onondaga Chert Total			35	85.37%
Kettle Point Chert	Lithic Debitage	Flake (Fragment)	4	9.76%
		Flake (Edge Trimming)	1	2.44%
	Informal Lithic	Utilized Flake (Primary)	1	2.44%
Kettle Point Chert Total			6	14.63%
Grand Total			41	100.00%

The lithic materials consisted primarily of Onondaga chert (n=35), with the remainder represented by Kettle Point chert (n=6). Flake fragments (n=18) and biface thinning flakes (n=9) were the most common types of lithic debitage. The informal lithic artifacts consisted of different types of utilized flakes (n=4) and a rough biface fragment,

whereas the formal lithic artifacts comprised biface fragments (n=2), end scrapers (n=2) and a stemmed point. A supplementary analysis of the formal lithic artifacts is provided in Appendix B. A flake fragment, a biface thinning flake and biface fragment of Onondaga chert exhibited evidence of heat alteration. The stemmed point was identified as an Adder Orchard type dating from ca. 2000–1400 BC in the Late Archaic period (Ellis et al. 2009:815).

No cultural features or structural elements of potential CHVI were identified. The artifacts were relatively evenly distributed across the scatter, although one small concentration was noted in the southeast. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.4.2 Analysis and Conclusions

The results indicate that Site 6 comprises a large deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The assemblage consisted of lithic debitage (n=31), informal lithic artifacts (n=5) and formal lithic artifacts (n=5). A diagnostic point from the Late Archaic period (ca. 2000–1000 BC) was recovered. The diversity of the finds and the diffuse nature of the scatter suggest that the deposit was associated with multiple instances of tool production, tool maintenance and resource processing.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 6 is of no further CHVI. Specifically, less than one diagnostic artifact and two non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area and less than 10 non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.5 Site 14 (AhHc-437)

3.5.1 Record of Finds

Site 14 was identified during the pedestrian survey of the eastern agricultural field (SD Map 5). The site consisted of a 24 x 8 m (NW-SE) scatter of Indigenous archaeological materials in a relatively flat area.

A total of four artifacts were observed on the field surface, all of which were collected. The assemblage consisted of biface thinning flakes (n=2) and a flake fragment of Onondaga chert and a biface thinning flake of Haldimand chert. The associated catalogue entries appear in Appendix A, Records 66–69. None of the artifacts exhibited evidence of heat alteration.

No cultural features or structural elements of potential CHVI were identified. No artifact concentrations were discernable. The inventory of the documentary record for this site is included in the overall inventory presented in in Appendix C.

3.5.2 Analysis and Conclusions

The results indicate that Site 14 comprises a small deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The assemblage consisted of biface thinning flakes (n=2) and a flake fragment of Onondaga chert and a biface thinning flake of Haldimand chert. None of the artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The deposit appears to be associated with tool maintenance.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 14 is of no further CHVI. Specifically, less than 10 non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.6 Site 16 (AhHc-438)

3.6.1 Record of Finds

Site 16 was identified during the pedestrian survey of the eastern agricultural field (SD Map 5). The site consisted of an isolated Indigenous artifact in a relatively flat area.

The artifact was observed on the field surface and collected. It consisted of a stemmed point of Onondaga chert. The associated catalogue entry appears in Appendix A, Record 71, and a supplementary analysis is provided in Appendix B. The artifact did not exhibit evidence of heat alteration, and it was identified as an Innes type dating from ca. 1500–1100 BC in the Late Archaic period (Ellis et al. 1990:109; Wilson 2002:4).

No cultural features or structural elements of potential CHVI were identified. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.6.2 Analysis and Conclusions

The results indicate that Site 16 comprises an isolated Indigenous artifact. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The find consisted of an Innes point of Onondaga chert from the Late Archaic period (ca. 1500–1100 BC). The deposit may represent a loss/discard locality associated with resource procurement.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 16 is of no further CHVI. Specifically, less than one diagnostic artifact and two non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.7 Site 17 (AhHc-439)

Site 17 was identified during the pedestrian survey of the eastern agricultural field (SD Map 5). The site consisted of a 50 x 18 m (N-S) scatter of Indigenous archaeological materials in an area of rolling topography.

A total of seven artifacts were observed on the field surface, all of which were collected. The assemblage consisted of biface thinning flakes (n=2), a flake fragment, a utilized flake fragment, a utilized biface thinning flake, a biface fragment and a stemmed point. The associated catalogue entries appear in Appendix A, Records 72–78, and a supplementary analysis of the formal lithic artifact is provided in Appendix B. One biface thinning flake exhibited evidence of heat alteration. The stemmed point was also determined to be representative of the Innes type and dates from ca. 1500–1100 BC in the Late Archaic period (Ellis et al. 1990:109; Wilson 2002:4).

No cultural features or structural elements of potential CHVI were identified. No artifact concentrations were discernable. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.7.1 Analysis and Conclusions

The results indicate that Site 17 comprises a small deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The assemblage consisted of biface thinning flakes (n=2), a flake fragment, a utilized flake fragment, a utilized biface thinning flake, a biface fragment and a stemmed point. The point was from the Late Archaic period (ca. 1500–1100 BC). The deposit appears to be associated with tool maintenance and resource processing.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 3 is of no further CHVI. Specifically, less than one diagnostic artifact and two non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.8 Site 22

3.8.1 Record of Finds

Site 22 was identified during the pedestrian survey of the eastern agricultural field (SD Map 5). The site consisted of a 17 x 1 m (NE-SW) scatter of Indigenous archaeological materials in a relatively flat area.

A total of two artifacts were observed on the field surface, both of which were collected. The assemblage consisted of a primary flake and an ovate biface of Onondaga chert. The associated catalogue entries appear in Appendix A, Records 79–80. Neither of the

artifacts exhibited evidence of heat alteration. The biface had characteristics similar to Middle Woodland preforms or cache blades but was not diagnostic.

No cultural features or structural elements of potential CHVI were identified. No artifact concentrations were discernable. The inventory of the documentary record for this site is included in the overall inventory presented in in Appendix C.

3.8.2 Analysis and Conclusions

The results indicate that Site 22 comprises a small deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for ploughing.

The assemblage consisted of a primary flake and an ovate biface of Onondaga chert. Neither of the artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The function of the site is unclear.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Site 22 is of no further CHVI. Specifically, less than 10 non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area. The site does not warrant further assessment.

3.9 Site 24

3.9.1 Record of Finds

Site 24 was identified during the test pit survey of wooded lands south of the garage (SD Map 5). The site consisted of a 2 x 1 m (N-S) scatter of Indigenous archaeological materials in an area of rolling topography. The stratigraphic sequence comprised dark brown sandy loam topsoil (Lot 1) over medium orange sandy loam subsoil (Lot 2). The finds were from Lot 1 (n=2).

A total of two artifacts were observed within two test pits (PTPs 5–6), both of which were collected. The assemblage consisted of a biface thinning flake and a utilized biface thinning flake of Onondaga chert. The associated catalogue entries appear in Appendix A, Records 81–82. Neither of the artifacts exhibited evidence of heat alteration.

No cultural features or structural elements of potential CHVI were identified. No areas of artifact concentration were discernable. The inventory of the documentary record for this site is included in the overall inventory presented in Appendix C.

3.9.2 Analysis and Conclusions

The results indicate that Site 24 comprises a small deposit of Indigenous archaeological materials. The site appears to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials.

The assemblage consisted of a biface thinning flake and a utilized biface thinning flake of Onondaga chert. Neither of the artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The deposit was likely associated with a minor instance of tool maintenance.

Insufficient archaeological resources were found during the initial survey at Site 24, and the proponent did not permit any intensified survey coverage. Site 24 was found to be of further CHVI based on professional judgement. The site warrants a Stage 3 site-specific assessment, but it is unclear whether Stage 4 mitigation will be needed.

3.10 Isolated Non-Diagnostic Finds

3.10.1 Record of Finds

Sites 2, 11–13 and 15 were identified during the pedestrian survey of the eastern agricultural field and the test pit survey of grassed lands east of the house (SD Map 4–SD Map 5). The sites consisted of isolated non-diagnostic Indigenous artifacts in relatively flat areas, save for Site 11, which was in an area of rolling topography.

A total of five isolated artifacts were observed on the field surface and within one test pit (PTP 4), all of which were collected. The finds consisted of lithic artifacts of Onondaga and Kettle Point chert. The associated catalogue entries appear in Appendix A, Records 4, 63–65 and 70. A quantitative summary of the isolated finds is provided in Table 8, and a supplementary analysis of the formal lithic artifact appears in Appendix B. None of the artifacts exhibited evidence of heat alteration.

Table 8: Summary of Isolated Finds

Site Identifier	Material	Object Group	Object Name	Heat Altered
2	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)	No
11	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)	No
12	Onondaga Chert	Informal Lithic	Rough Biface (Fragment)	No
13	Kettle Point chert	Formal Lithic	Biface (Ovate)	No
15	Kettle Point chert	Informal Lithic	Core (Rotated Fragment)	No

No cultural features or structural elements of potential CHVI were identified. The inventory of the documentary record for each site is included in the overall inventory presented in Appendix C.

3.10.2 Analysis and Conclusions

The results indicate that Sites 2, 11–13 and 15 each comprise an isolated Indigenous artifact. The sites appear to have a relatively moderate level of integrity, as there was no observable evidence of disturbance since the deposition of the materials, save for both past and more recent ploughing.

The finds consisted of lithic artifacts of Onondaga and Kettle Point chert. None of the lithic artifacts were diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9500 BC–AD 1650). The function of each site is unclear.

When evaluated against the criteria set out in Section 2.2 of the 2011 S&Gs, the available evidence indicates that Sites 11–13 and 15 are of no further CHVI. Specifically, less than 10 non-diagnostic artifacts were found within a 10 x 10 m pedestrian survey area at each site. The sites do not warrant further assessment. Insufficient archaeological resources were found during the initial survey at Site 2, and the proponent did not permit any intensified survey coverage. Site 2 was found to be of further CHVI based on professional judgement. The site warrants a Stage 3 site-specific assessment, but it is unclear whether Stage 4 mitigation will be needed.

4.0 RECOMMENDATIONS

The Stage 1 assessment determined that the project area comprised a mixture of areas of archaeological potential and areas of no archaeological potential. The Stage 2 assessment resulted in the identification of 13 locations of archaeological materials: Sites 1 (AhHc-434), 2, 3 (AhHc-435), 6 (AhHc-436), 11–13, 14 (AhHc-437), 15, 16 (AhHc-438), 17 (AhHc-439), 22 and 24. Insufficient archaeological resources were found during the initial survey at Sites 1, 2 and 24 to meet the criteria for continuing to Stage 3, and the proponent did not permit any intensified survey coverage. Sites 1, 2 and 24 were found to be of further CHVI based on professional judgement. Sites 3, 6, 11–17 and 22 were found to be of no further CHVI.

It is recommended that Sites 1, 2 and 24 be subject to a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 S&Gs. An appropriate assessment method for these sites would comprise test unit excavation using the strategy set out in Table 3.1, Numbers 1 and 2 of the 2011 S&Gs. This strategy involves the excavation of grid test units at a 5 m interval across the site extent and additional test units amounting to at least 20% of the grid unit total in areas of interest.

Each test unit must be stratigraphically excavated into at least the first 5 cm of subsoil, and all soils must be screened through mesh with an aperture of no greater than 6 mm. If a potential cultural feature is uncovered, the exposed plan of the feature must be recorded and geotextile fabric must be placed over the unit floor prior to backfilling. Section 3.2.2 Guideline 3 of the 2011 S&Gs states that exposed cultural features may be excavated during a Stage 3 assessment if the information is required to inform a recommendation for or against Stage 4 mitigation of development impacts.

The remainder of the property was not assessed and would require further assessment in advance of any future land alterations. Potential modelling and recommendations for the balance of the property would be addressed as part of the associated project.

While the investigation involved fulsome and meaningful engagement with the participating First Nations and Indigenous communities, archaeology is only one of many aspects of interest pertaining to their ongoing stewardship of treaty and traditional territories. The engaged Indigenous groups will be provided with the report for consideration and comment, and any concerns will be addressed prior to submission.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the 2011 S&Gs requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process:

- 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 of 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 Archaeological 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.
- 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 licence.
- The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar at the Ministry of Public and Business Service Delivery and Procurement.

6.0 IMAGES

Image 1: Disturbed Lands
(May 28, 2025; Facing Northeast)

Image 2: Disturbed Lands
(May 28, 2025; Facing Southeast)

Image 3: Disturbed Lands
(November 26, 2024; Facing South)

Image 4: Sloped Lands
(November 26, 2024; Facing North)

Image 5: Pedestrian Survey
(November 26, 2024; Facing Northeast)

Image 6: Pedestrian Survey
(November 26, 2024; Facing Southwest)

Image 7: Pedestrian Survey
(May 27, 2025; Facing Northwest)

Image 8: Pedestrian Survey
(May 27, 2025; Facing North)

Image 9: Intensified Survey (Site 6)
(May 27, 2025; Facing East)

Image 10: Intensified Survey (Site 11)
(May 26, 2025; Facing Northwest)

Image 11: Test Pit Survey
(November 26, 2024; Facing Northwest)

Image 12: Test Pit Survey
(May 26, 2025; Facing Northeast)

Image 13: Test Pit Survey
(November 26, 2024; Facing North)

Image 14: Test Pit Survey
(May 28, 2025; Facing Southwest)

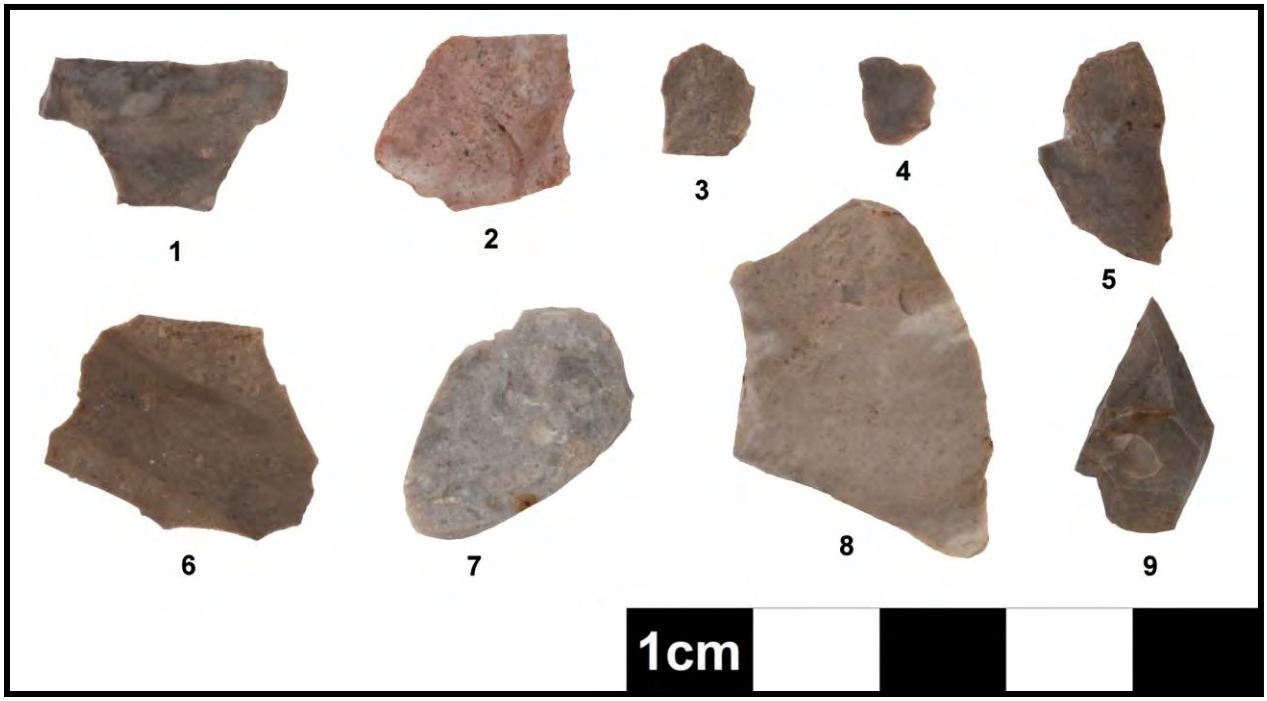


Image 15: Sample of Lithic Debitage

(1: Onondaga Chert Flake Fragment, Site 3, Record 5; 2: Kettle Point Chert Flake Fragment, Site 6, Record 31; 3: Onondaga Chert Edge Trimming Flake, Site 11, Record 63; 4: Kettle Point Chert Edge Trimming Flake, Site 6, Record 56; 5–6: Onondaga Chert Biface Thinning Flakes, Sites 1 and 2, Records 1 and 4; 7: Haldimand Chert Biface Thinning Flake, Site 14, Record 69; 8: Onondaga Chert Primary Flake, Site 3, Record 11; 9: Burnt Onondaga Chert Shatter, Site 3, Record 12)

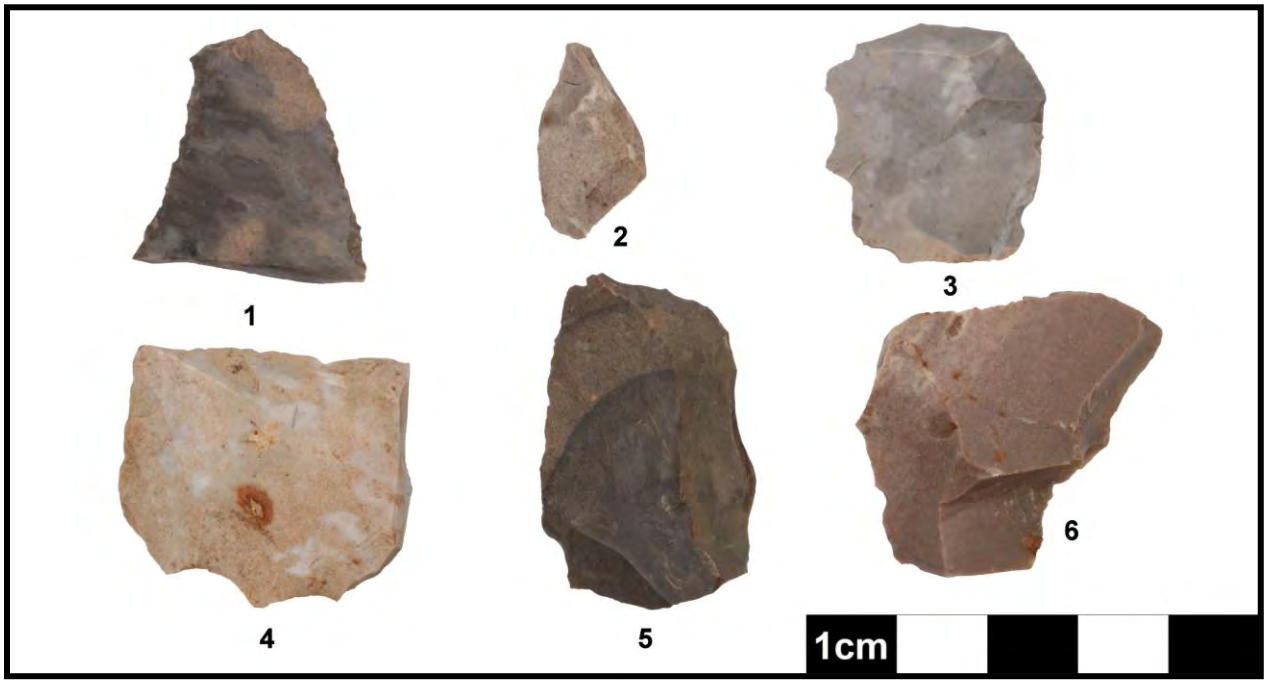


Image 16: Sample of Informal Lithic Artifacts

(1: Onondaga Chert Utilized Flake Fragment, Site 17, Record 78; 2: Onondaga Chert Utilized Biface Thinning Flake, Site 24, Record 82; 3: Onondaga Chert Utilized Primary Flake, Site 6, Record 46; 4–5: Onondaga Chert Rough Biface Fragments, Sites 6 and 12, Records 38 and 64; 6: Kettle Point Chert Rotated Core Fragment, Site 15, Record 70)

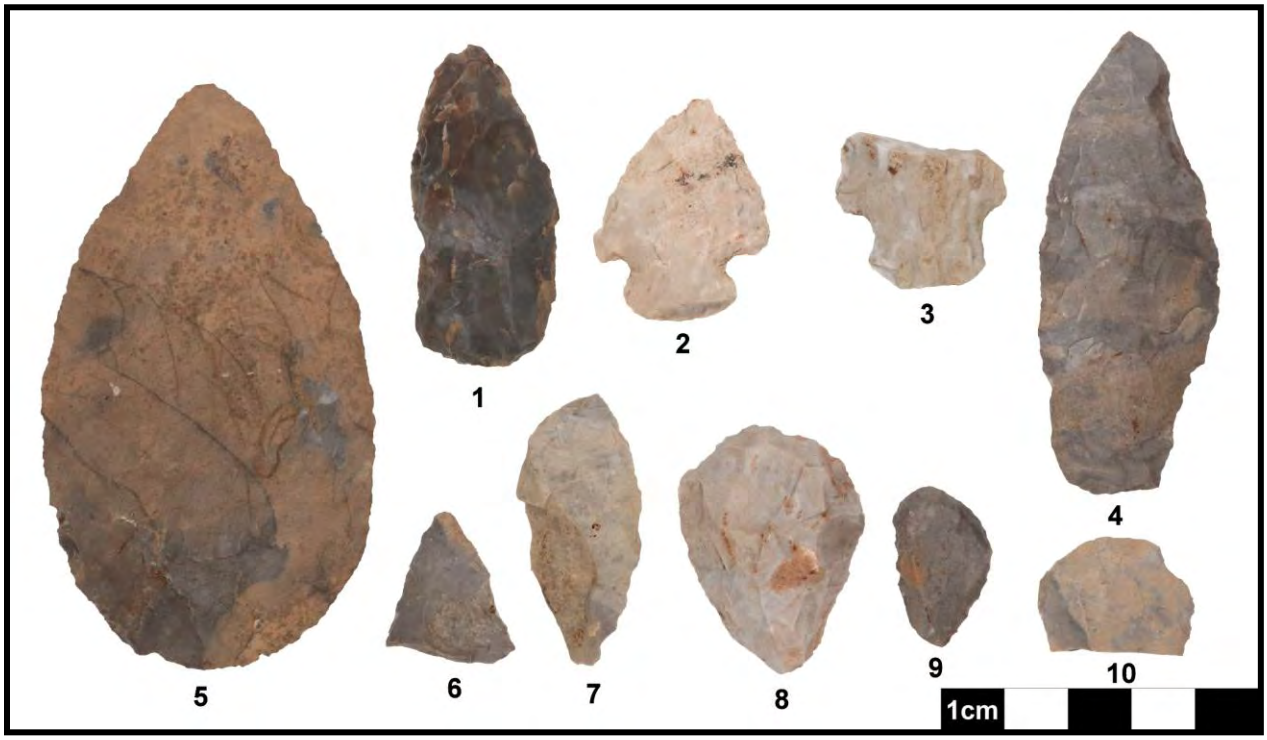
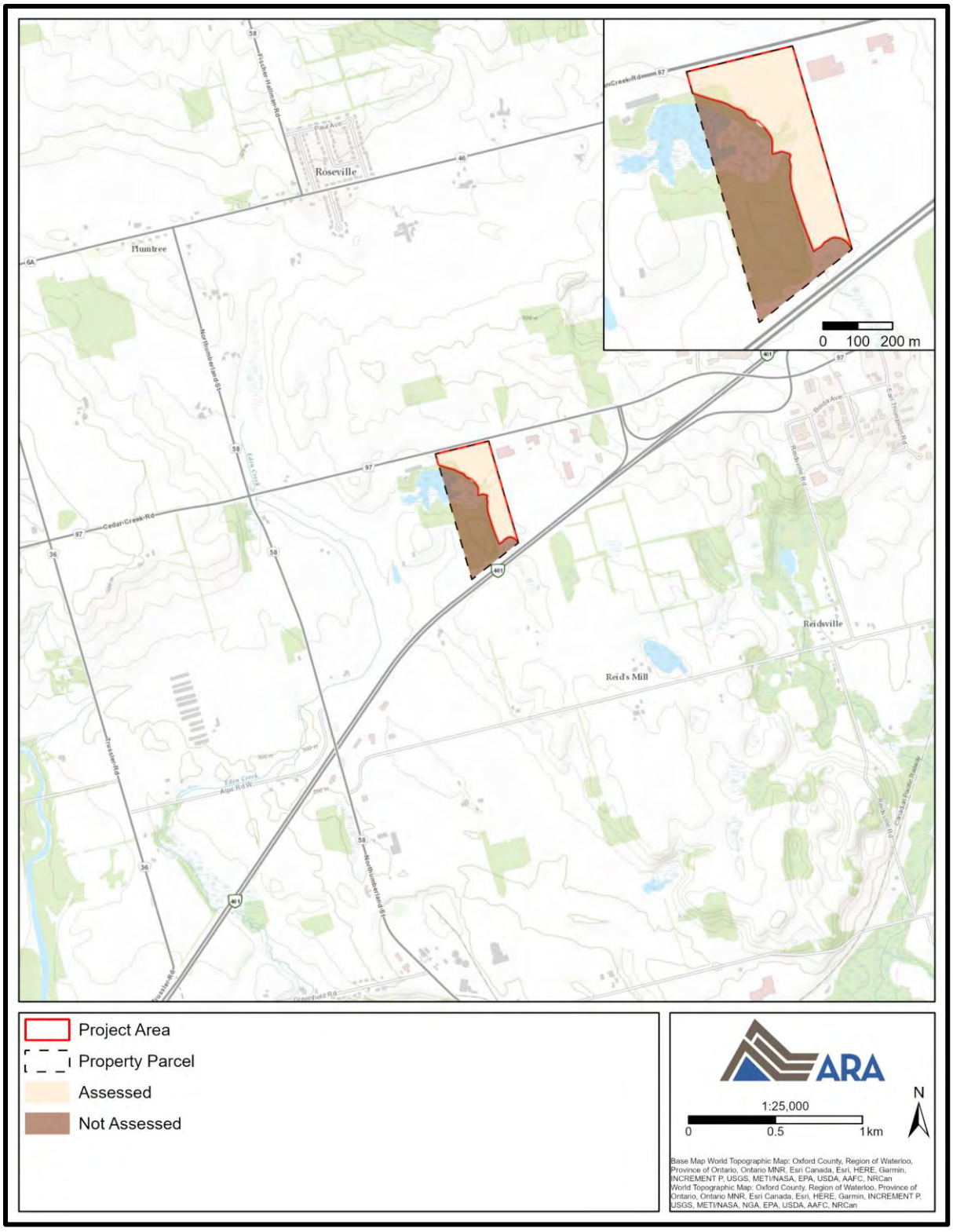


Image 17: Sample of Formal Lithic Artifacts

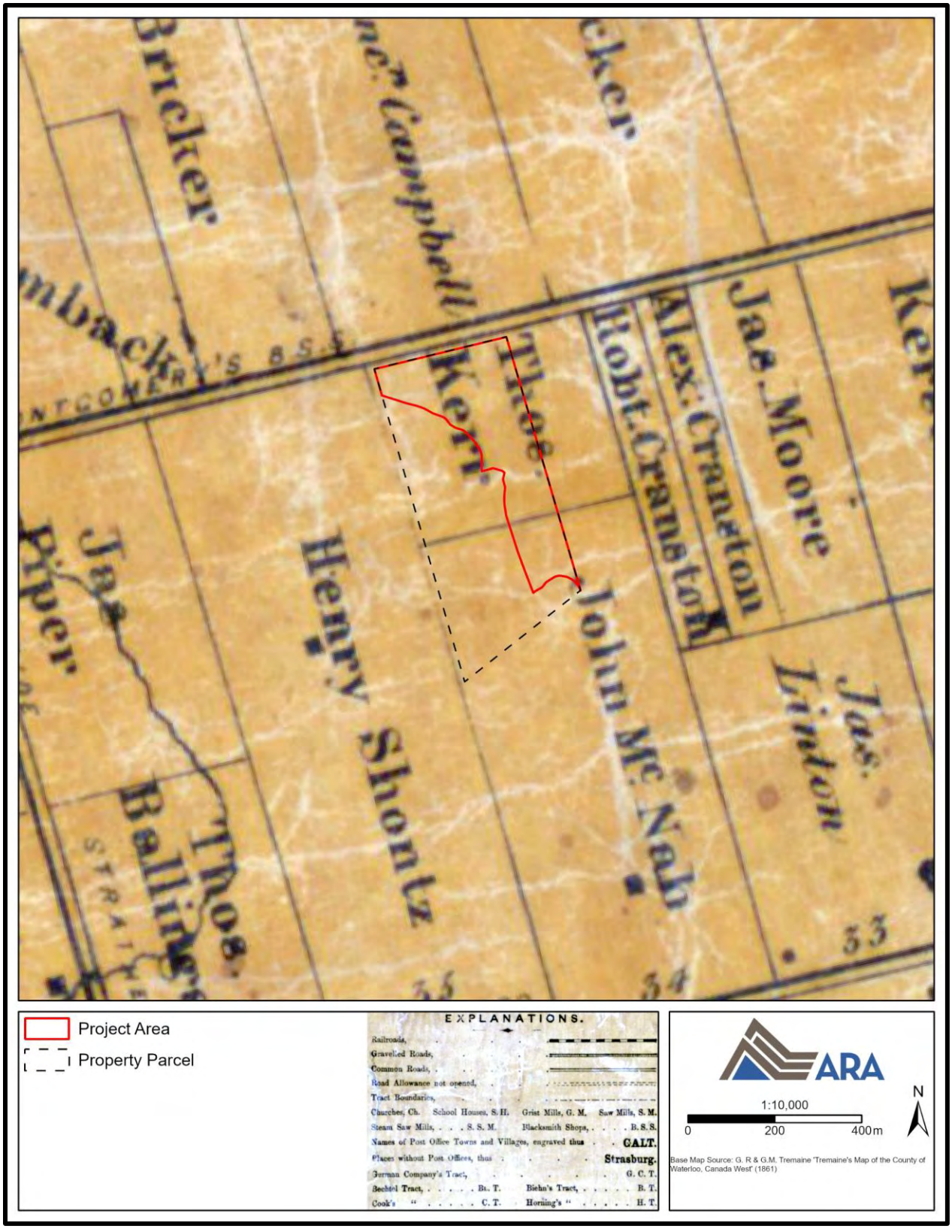
(1: Kettle Point Chert Biface, Site 13, Record 65; 2–3: Onondaga Chert Innes Points, Sites 16 and 17, Records 71 and 76; 4: Onondaga Chert Adder Orchard Point, Site 6, Record 62; 5: Onondaga Chert Biface, Site 22, Record 79; 6–7: Onondaga Chert Biface Fragments, Sites 6 and 17, Records 44 and 77; 8–10: Onondaga Chert End Scrapers, Sites 6, 3, and 6, Records 24, 19 and 52)

7.0 MAPS

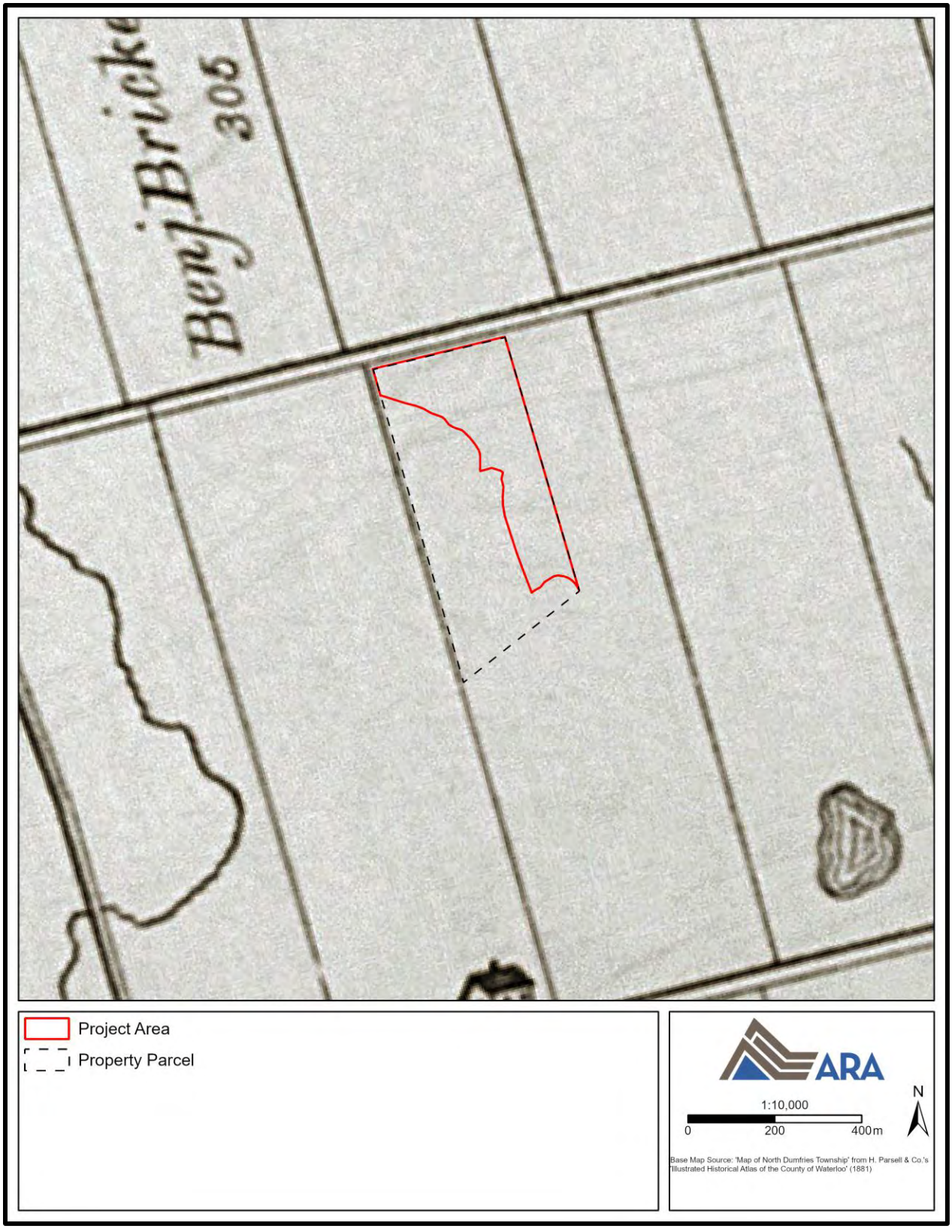


Map 1: Location of the Project Area

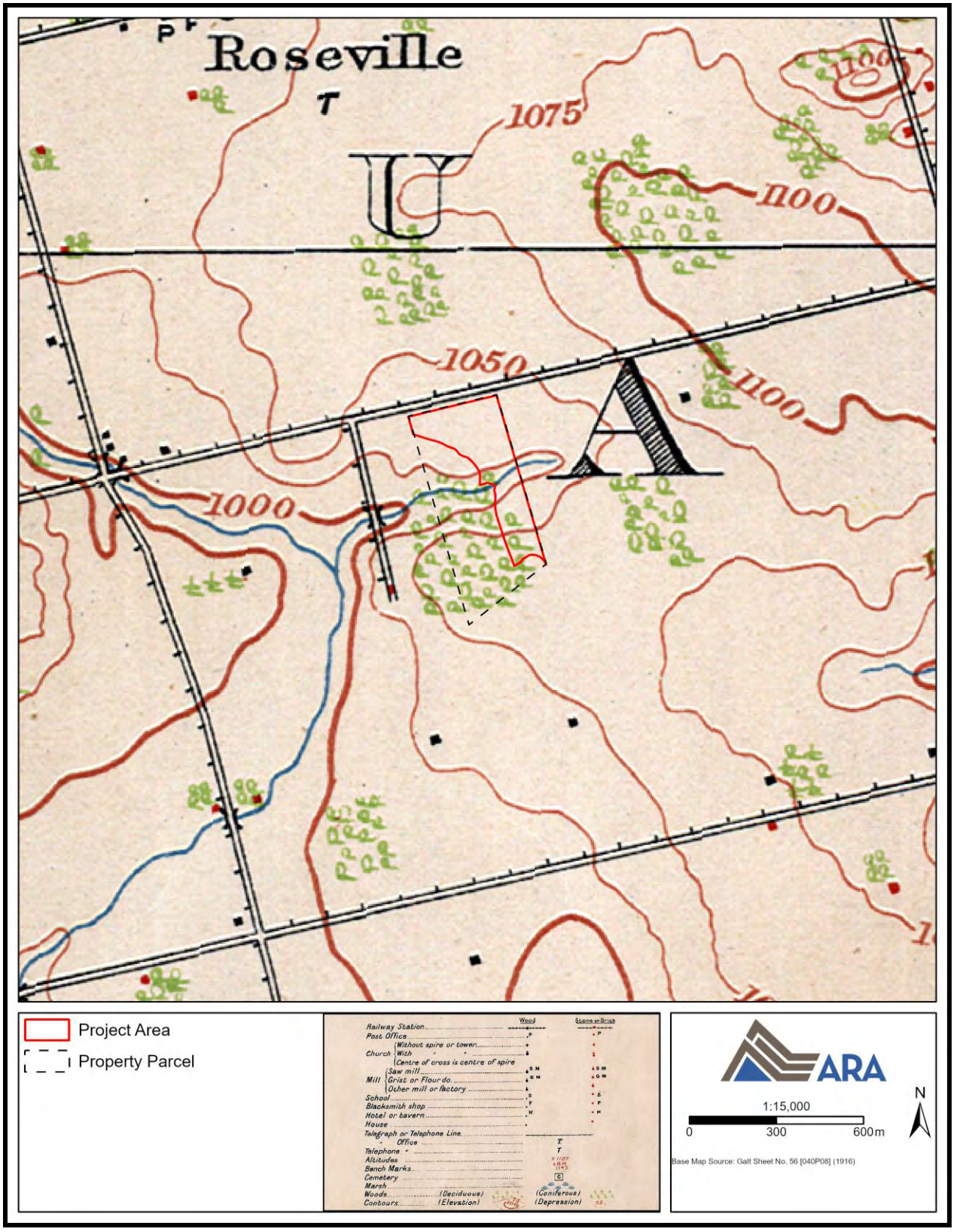
(Produced under licence using ArcGIS® software by Esri, © Esri)



Map 2: Tremaine's Map of the County of Waterloo, Canada West (1861)
(Produced under licence using ArcGIS® software by Esri, © Esri; OHCMP 2025)



Map 3: Illustrated Historical Atlas of the County of Waterloo, Ont. (1881)
(Produced under licence using ArcGIS® software by Esri, © Esri; MU 2001)

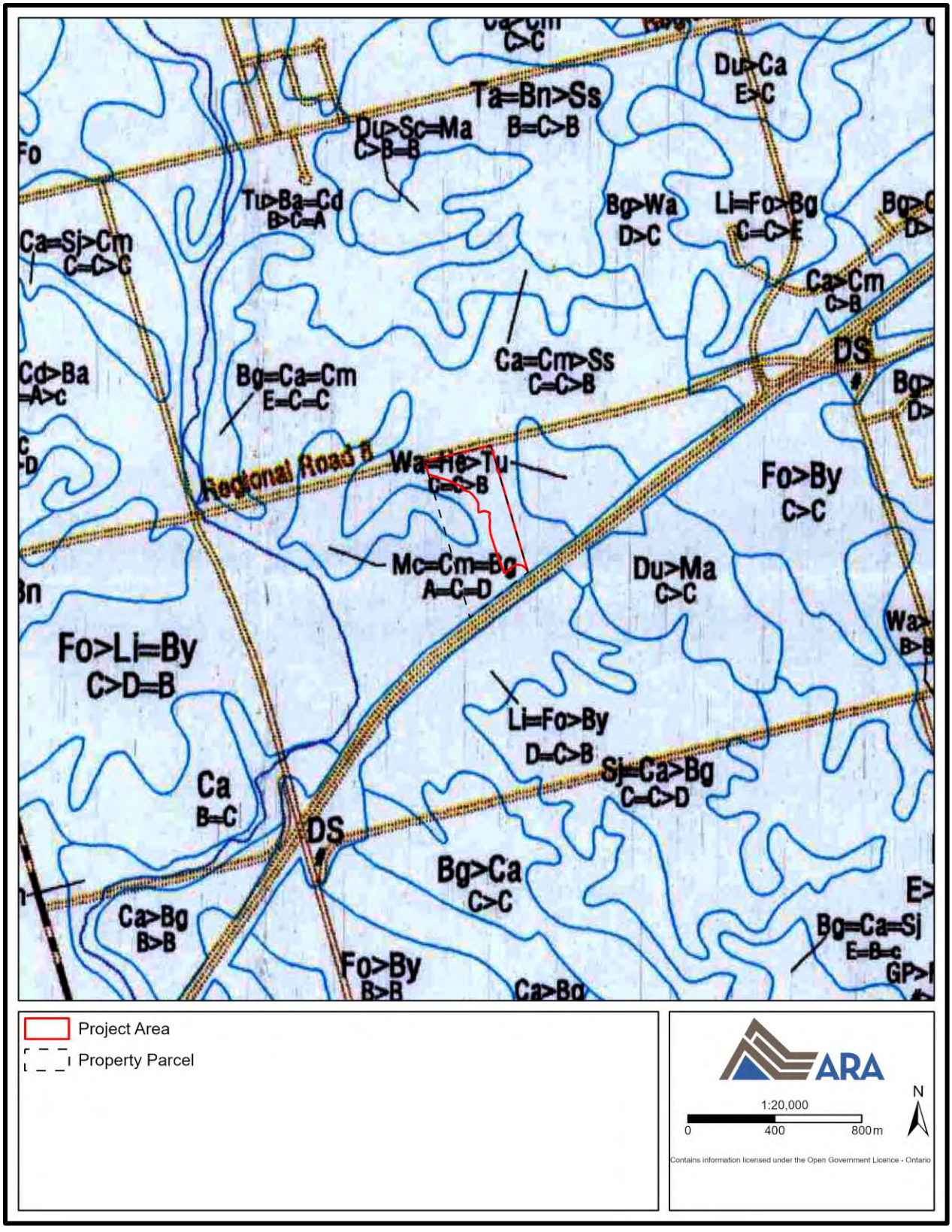


Map 4: Topographic Map (1916)

(Produced under licence using ArcGIS® software by Esri, © Esri; OCUL 2025)

Map 5: Aerial Image (1954)

(Produced under licence using ArcGIS® software by Esri, © Esri; U of T 2025)

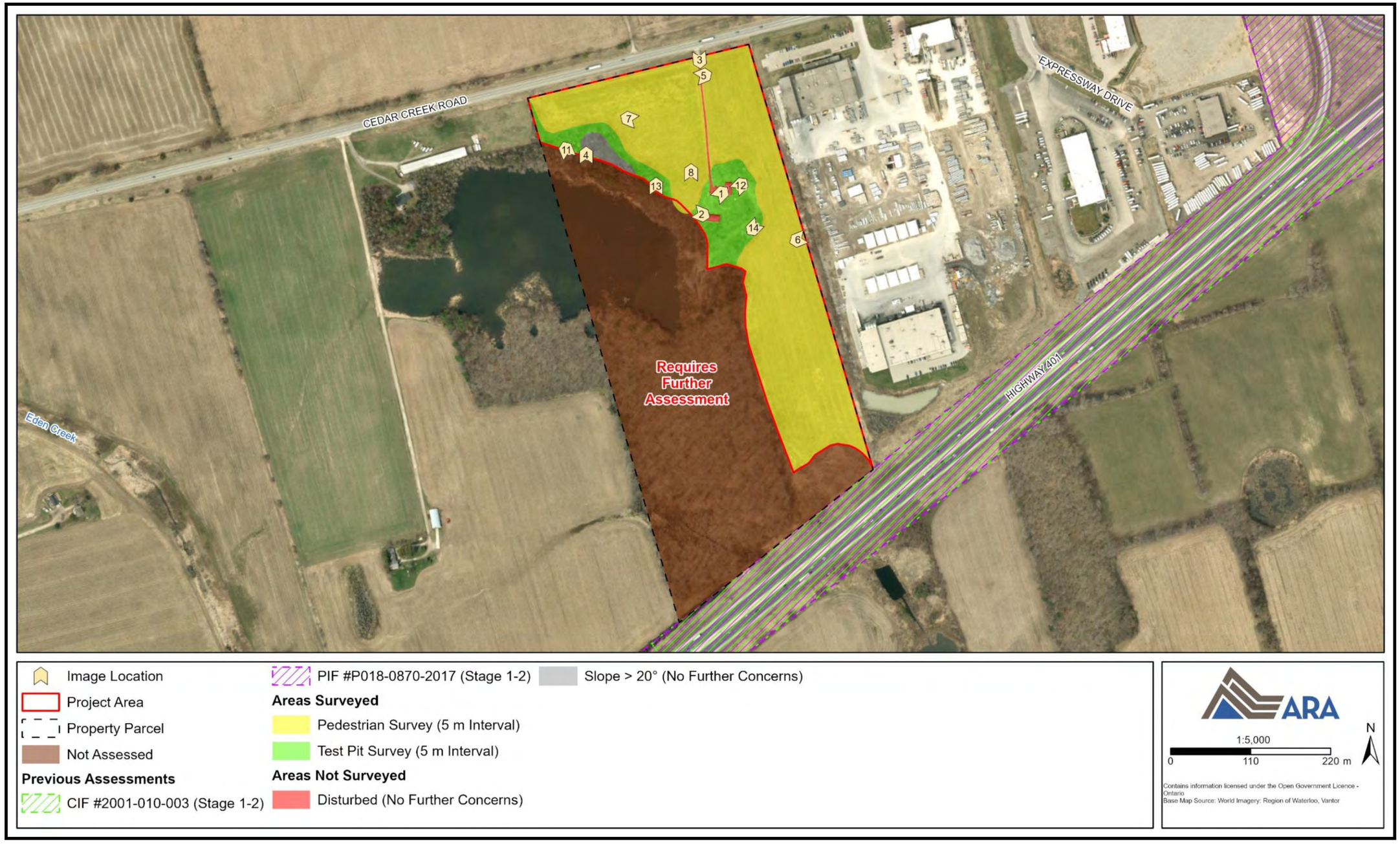


Map 6: Soil Map

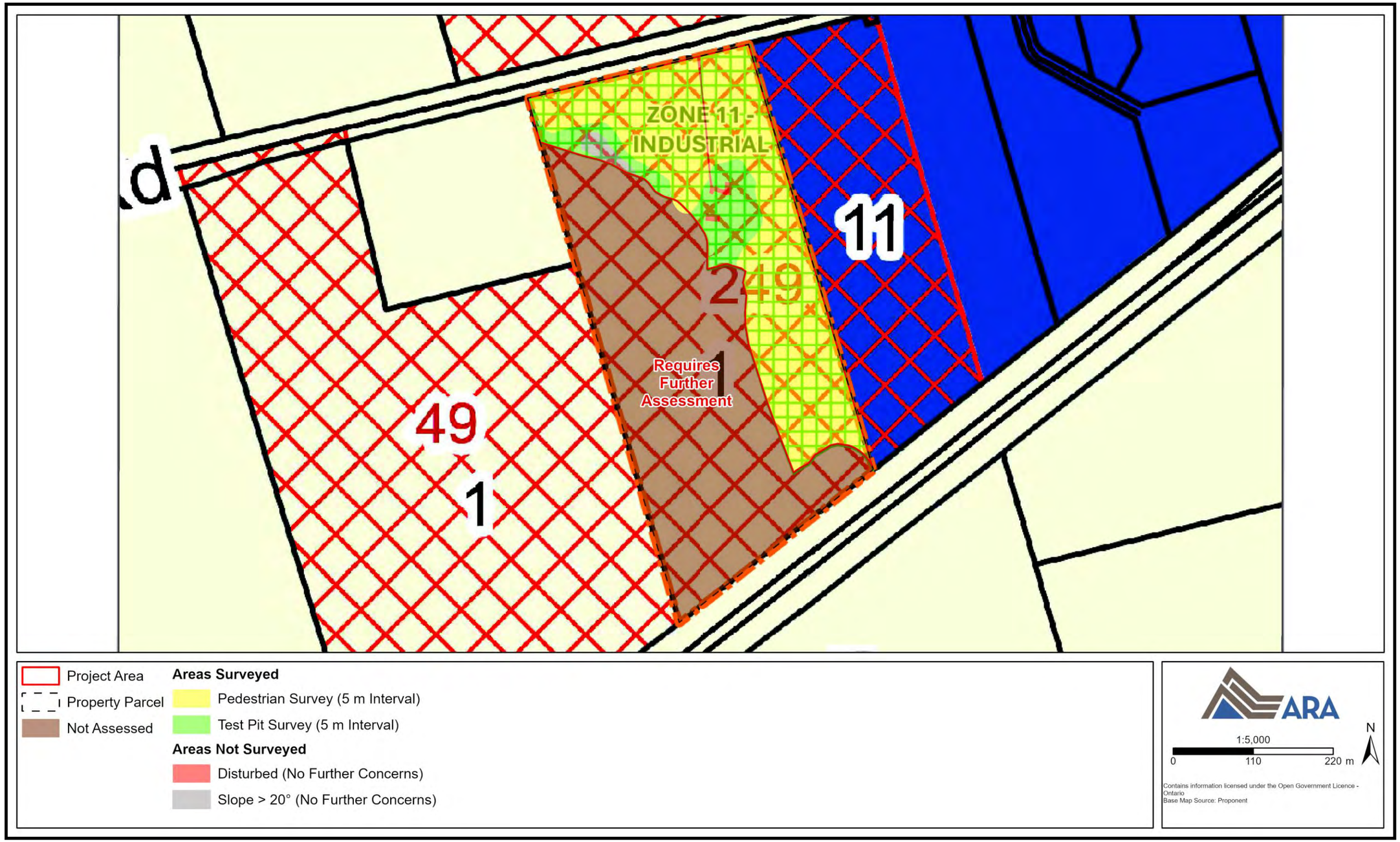
(Produced under licence using ArcGIS® software by Esri, © Esri; Cressman 1996:Sheet 3)

Map 7: Features of Potential

(Produced under licence using ArcGIS® software by Esri, © Esri)



Map 8: Field Methods (Aerial Image)
(Produced under licence using ArcGIS® software by Esri, © Esri)



Map 9: Field Methods (Zoning Plan)
(Produced under licence using ArcGIS® software by Esri, © Esri)

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APPENDICES

Appendix A: Archaeological Materials Catalogue

Record	Site	Provenience	Lot	Depth (cm)	Location	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered	Box
1	1	PTP 1	1	0-35		26/11/2024	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
2	1	PTP 2	1	0-29		26/11/2024	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
3	1	PTP 3	1	0-31		26/11/2024	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
4	2	PTP 4	1	0-20	176	26/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
5	3	Surface	Surface	N/A	100	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
6	3	Surface	Surface	N/A	101	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
7	3	Surface	Surface	N/A	102	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
8	3	Surface	Surface	N/A	103	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
9	3	Surface	Surface	N/A	104	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
10	3	Surface	Surface	N/A	105	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Primary)				Discolouration and scaling	Yes	H1
11	3	Surface	Surface	N/A	106	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Primary)					No	H1
12	3	Surface	Surface	N/A	107	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Shatter				Discolouration and thermal fracture	Yes	H1
13	3	Surface	Surface	N/A	108	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)				Potlidding	No	H1
14	3	Surface	Surface	N/A	109	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Primary)					No	H1
15	3	Surface	Surface	N/A	110	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
16	3	Surface	Surface	N/A	111	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
17	3	Surface	Surface	N/A	112	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
18	3	Surface	Surface	N/A	113	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
19	3	Surface	Surface	N/A	114	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Scraper (End)				Manufactured from primary flake / Single large flake removed to form flattened dorsal surface / Retouched on dorsal to form steeply beveled convex distal margin	No	H1
20	3	Surface	Surface	N/A	115	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
21	3	Surface	Surface	N/A	116	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
22	6	Surface	Surface	N/A	117	27/05/2025	1	Indigenous	Kettle Point Chert	Informal Lithic	Utilized Flake (Primary)				Wear along convex lateral margin	No	H1
23	6	Surface	Surface	N/A	118	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
24	6	Surface	Surface	N/A	119	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Scraper (End)				Manufactured from primary flake / Coarse dorsal flaking / Retouched on dorsal to form steeply beveled convex distal margin	No	H1
25	6	Surface	Surface	N/A	120	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
26	6	Surface	Surface	N/A	121	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Biface (Fragment)				Small fragment with bifacial thinning	No	H1
27	6	Surface	Surface	N/A	122	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
28	6	Surface	Surface	N/A	123	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)				Potlidding	Yes	H1
29	6	Surface	Surface	N/A	124	27/05/2025	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake (Fragment)					No	H1
30	6	Surface	Surface	N/A	125	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
31	6	Surface	Surface	N/A	126	27/05/2025	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake (Fragment)					No	H1
32	6	Surface	Surface	N/A	127	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
33	6	Surface	Surface	N/A	128	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Fragment)				Wear across straight fragmented margin	No	H1
34	6	Surface	Surface	N/A	129	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
35	6	Surface	Surface	N/A	130	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
36	6	Surface	Surface	N/A	131	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
37	6	Surface	Surface	N/A	132	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
38	6	Surface	Surface	N/A	133	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Rough Biface (Fragment)				Flake blank with coarse bifacial thinning	No	H1
39	6	Surface	Surface	N/A	134	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
40	6	Surface	Surface	N/A	135	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)				Discolouration and thermal fracture	Yes	H1
41	6	Surface	Surface	N/A	136	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
42	6	Surface	Surface	N/A	137	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
43	6	Surface	Surface	N/A	138	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
44	6	Surface	Surface	N/A	139	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Biface (Fragment)				Fine bifacial thinning with marginal trimming / Thermal fracture	Yes	H1
45	6	Surface	Surface	N/A	140	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
46	6	Surface	Surface	N/A	141	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Primary)				Wear along convex lateral margin / Spurred lateral margin with wear	No	H1
47	6	Surface	Surface	N/A	142	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
48	6	Surface	Surface	N/A	143	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
49	6	Surface	Surface	N/A	144	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
50	6	Surface	Surface	N/A	145	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
51	6	Surface	Surface	N/A	146	27/05/2025	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake (Fragment)					No	H1
52	6	Surface	Surface	N/A	147	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Scraper (End)				Retouched dorsal side to form steeply beveled convex distal margin	No	H1
53	6	Surface	Surface	N/A	148	27/05/2025	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake (Fragment)					No	H1
54	6	Surface	Surface	N/A	149	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
55	6	Surface	Surface	N/A	150	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Primary)				Wear along convex lateral margin	No	H1
56	6	Surface	Surface	N/A	151	27/05/2025	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
57	6	Surface	Surface	N/A	152	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
58	6	Surface	Surface	N/A	153	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
59	6	Surface	Surface	N/A	154	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
60	6	Surface	Surface	N/A	155	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
61	6	Surface	Surface	N/A	156	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1

Record	Site	Provenience	Lot	Depth (cm)	Location	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered	Box
62	6	Surface	Surface	N/A	157	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Point (Stemmed)	Adder Orchard	ca. 2000–1400 BC	Ellis et al. 2009:815	Large, shallow thinning flake scars across surface / Continuous marginal trimming / Light lateral stem grinding / Slight shoulders / Retouched to form slightly concave upper lateral blade	No	H1
63	11	Surface	Surface	N/A	158	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Edge Trimming)					No	H1
64	12	Surface	Surface	N/A	159	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Rough Biface (Fragment)				Primary flake with coarse bifacial flaking / Unmodified proximal end	No	H1
65	13	Surface	Surface	N/A	160	27/05/2025	1	Indigenous	Kettle Point Chert	Formal Lithic	Biface (Ovate)				Manufactured from primary flake / Coarse bifacial thinning / Discontinuous marginal retouch, including base	No	H1
66	14	Surface	Surface	N/A	161	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
67	14	Surface	Surface	N/A	162	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
68	14	Surface	Surface	N/A	163	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
69	14	Surface	Surface	N/A	164	27/05/2025	1	Indigenous	Haldimand Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
70	15	Surface	Surface	N/A	165	27/05/2025	1	Indigenous	Kettle Point Chert	Informal Lithic	Core (Rotated Fragment)					No	H1
71	16	Surface	Surface	N/A	166	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Point (Stemmed)	Innes	ca. 1500–1100 BC	Wilson 2002:4; Ellis et al. 1990:109	Complete bifacial thinning and retouch / Basal thinning with light grinding / Wide, horizontal shoulders with slight barb / Rounded expanding stem	No	H1
72	17	Surface	Surface	N/A	167	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)				Scaling	Yes	H1
73	17	Surface	Surface	N/A	168	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
74	17	Surface	Surface	N/A	169	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Biface Thinning)				Wear along convex distal margin	No	H1
75	17	Surface	Surface	N/A	170	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Fragment)					No	H1
76	17	Surface	Surface	N/A	171	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Point (Stemmed)	Innes	ca. 1500–1100 BC	Wilson 2002:4; Ellis et al. 1990:109	Complete bifacial thinning and retouch / Basal thinning with light grinding / Horizontal shoulders / Rounded expanding stem	No	H1
77	17	Surface	Surface	N/A	172	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Biface (Fragment)				Complete bifacial thinning with discontinuous marginal trimming	No	H1
78	17	Surface	Surface	N/A	173	27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Fragment)				Retouched slightly concave lateral margin	No	H1
79	22	Surface	Surface	N/A	174	27/05/2025	1	Indigenous	Onondaga Chert	Formal Lithic	Biface (Ovate)				Large biface with large, shallow thinning flake scars and continuous lateral trimming / Characteristics similar to Middle Woodland preform or cache blade (as per Fox 2012)	No	H1
80	22	Surface	Surface	N/A	175	27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Primary)					No	H1
81	24	PTP 5	1	0-23		27/05/2025	1	Indigenous	Onondaga Chert	Lithic Debitage	Flake (Biface Thinning)					No	H1
82	24	PTP 6	1	0-20		27/05/2025	1	Indigenous	Onondaga Chert	Informal Lithic	Utilized Flake (Biface Thinning)				Wear along convex lower lateral margin	No	H1

Appendix B: Supplementary Analysis of Formal Lithic Artifacts

Site	Object Name	Record	Length (mm)	Width (mm)	Thickness (mm)	Completeness	Cross-Section	Blade Length (mm)	Lateral Edge Shape	Stem Length (mm)	Base Width (mm)	Haft Width (mm)	Notch Width (mm)	Basal Edge Shape
3	Scraper (End)	19	24.9	15.4	5.8	Complete	Trapezoidal	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Biface (Fragment)	26	19.9+	14.3+	4.6+	Fragment	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate
6	Biface (Fragment)	44	24.1+	20.3+	5.7+	Tip	Plano-Convex	25.1+	Straight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate
6	Point (Stemmed)	62	74.6	30.1	10.7	Complete	Plano-Convex	57.1	Convex	20.6	15.8	21.2	N/A	Slightly convex
6	Scraper (End)	24	38.8	30.1	9.9	Complete	Trapezoidal	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Scraper (End)	52	18.2+	25.1+	5.9+	Missing proximal end	Plano-Median Ridged	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Biface (Ovate)	65	51.8	24.2	9.4	Complete	Plano-Convex	N/A	Convex	N/A	20.7	N/A	N/A	Convex
16	Point (Stemmed)	71	32.5	27.7	5.9	Complete	Biconvex	30.5	Convex	9.8	17.9	15.3	N/A	Convex
17	Biface (Fragment)	77	42.1+	21.9+	7.1+	Missing base and partial blade	Biconvex	42.5+	Convex	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate
17	Point (Stemmed)	76	25.2+	26.7	8.7	Missing tip	Plano-Convex	13.5+	Indeterminate	11.5	18.4	16.7	N/A	Convex
22	Biface (Ovate)	79	92.1	52.2	11.8	Complete	Biconvex	N/A	Convex	N/A	32.3	N/A	N/A	Convex

Appendix C: Documentary Record

Category	Total	Nature	Location
Field notes	8	Digital	50 Nebo Road, Unit 1, Hamilton
Maps	7	Digital	50 Nebo Road, Unit 1, Hamilton
Photographs	66	Digital	50 Nebo Road, Unit 1, Hamilton