



Stage 1–3 Archaeological Assessments

442 Bruce Road 20
Part 1, Plan 3R
Municipality of Brockton
Part of Lot 15, Concession 5
Geographic Township of Greenock
Bruce County

Prepared for:

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Archaeological Licence #P1033
PIF #P1033-0028-2023 and
#P1033-0037/0038/0039/0040/0041-2023

Original Report

01/02/2024

EXECUTIVE SUMMARY

Great Lakes Archaeology was retained by Cobide Engineering to conduct Stage 1, 2, and 3 archaeological assessments of a 12.2 hectare property located at 442 Bruce Road 20, Municipality of Brockton. The study area is an agricultural field located, in the geographic township of Greenock, Bruce County. The assessment was undertaken in support of a zoning by-law amendment to change the zoning from General Agriculture (A1) to General Agriculture Special A1-1 and A1-1-H and General Agriculture Special (A1-107). All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* and the 2011 *Standards & Guidelines for Consultant Archaeologists* and in consultation with the 2011 Saugeen Ojibway Nation *Conducting Archaeology within the Traditional Territory of the Saugeen Ojibway Nation Standards*.

The Stage 1 and 2 assessments were conducted in September 2023 under Project Information Form #P1033-0028-2023. The investigation was restricted to Part 1 of Plan 3R, specifically the agricultural field as the wooded area will remain untouched. Saugeen Ojibway Nation consented to a scoped assessment of the property, contingent upon the imposition of a holding provision on the unassessed portions of the property. Legal permission to access the assessed lands was granted by the proponent.

The Stage 2 assessment resulted in the identification of five locations of archaeological materials that required further assessment: the Teeswater site (BaHh-2), Site 2 (BaHh-3), Site 3 (BaHh-4), Site 4 (BaHh-5), and Site 5 (BaHh-6). The Stage 3 site-specific assessments of the five Indigenous sites were conducted in October and November 2023 under Project Information Forms #P1033-0037/0038/0039/0040/0041-2023.

The Stage 1 assessment identified archaeological potential for both Indigenous and Euro-Canadian materials in the study area. Following the Stage 2 assessment, five areas of archaeological materials (Site 1–Site 5) were discovered. The subsequent Stage 3 site-specific assessments revealed that, due to low yields and the absence of diagnostics, none of these sites have further CHVI and do not warrant Stage 4 mitigation of development impacts. **Therefore, no additional archaeological assessments are recommended, and the study area can be considered free of archaeological concern.**

However, the unassessed portions of the property as indicated on the survey map, must be subjected to a Holding provision. This provision mandates the completion of an archaeological study, with recommendations implemented prior to any development proceeding.

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1.0 PROJECT CONTEXT

1.1 Development Context

Great Lakes Archaeology (GLA) was retained by Cobide Engineering to conduct Stage 1, 2, and 3 archaeological assessments of a 12.2 hectare property located at 442 Bruce Road 20, Municipality of Brockton (Figure 1). The study area is an agricultural field located, in the geographic township of Greenock, Bruce County. The assessment was undertaken in support of a zoning by-law amendment to change the zoning from General Agriculture (A1) to General Agriculture Special A1-1 and A1-1-H and General Agriculture Special (A1-107). All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* and the 2011 *Standards & Guidelines for Consultant Archaeologists (S&Gs)* and in consultation with the 2011 Saugeen Ojibway Nation (SON) *Conducting Archaeology within the Traditional Territory of the Saugeen Ojibway Nation Standards*.

The assessments were triggered by the requirements set out in Section 2.6 of the Provincial Policy Statement, 2020 issued under Section 3 of the *Planning Act*, and the Municipality of Brockton Zoning By-Law 2013-26, as amended.

The Stage 1 and 2 assessments were conducted in September 2023 under Project Information Form (PIF) #P1033-0028-2023. The investigation was restricted to Part 1 of Plan 3R, specifically the agricultural field as the wooded area will remain untouched. SON consented to a scoped assessment of the property, contingent upon the imposition of a holding provision on the unassessed portions of the property. Legal permission to access the assessed lands was granted by the proponent. As outlined by Section 1.0 and Section 2.0 of the 2011 S&Gs, the Stage 1 and 2 assessment was carried out to:

- Provide information concerning the geography, history, previous archaeological fieldwork and current land condition of the study area;
- Determine the presence of known archaeological sites in the study area;
- Evaluate the archaeological potential of the study area;
- Document all archaeological resources within the study area;
- Determine whether the study area contains archaeological resources requiring further assessment; and
- Recommend appropriate Stage 3 assessment strategies, if any archaeological resources requiring further assessment are identified.

The Stage 2 assessment resulted in the identification of five locations of archaeological materials that required further assessment: the Teeswater site (BaHh-2), Site 2 (BaHh-3), Site 3 (BaHh-4), Site 4 (BaHh-5), and Site 5 (BaHh-6). The Stage 3 site-specific assessments of the five Indigenous sites were conducted in October and November 2023 under PIFs #P1033-0037/0038/0039/0040/0041-2023. As outlined by Section 3.0 of the 2011 S&Gs, the Stage 3 assessment was carried out to:

- Determine the extent of the archaeological site and the characteristics of the artifacts;
- Collect a representative sample of artifacts;
- Assess the cultural heritage value or interest (CHVI) of the archaeological site; and
- Determine the need for mitigation of development impacts and recommend appropriate strategies for mitigation and future conservation.

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.

1.2 Historical Context

The purpose of this section, according to the S&Gs, Section 7.5.7, Standard 1, is to describe the past and present land use, the settlement history and any other relevant historical information pertaining to the study area.

1.2.1 Pre-Contact Settlement History

A variety of Indigenous groups have occupied what is now Bruce County for approximately the past 11,000 years. For the purposes of research and discussion the Pre-Contact period is often categorized by archaeologists into time periods: Palaeo, Archaic and Woodland. Each of these periods consist of a range of sub-periods that are characterized by identifiable trends in material culture and settlement patterns. The purpose of this method is organizational to manage the considerable variability observed over time in this region and does not imply there were long periods of stasis followed by periods of change. Table 1 provides a general summary of the principal characteristics of these sub-periods.

Table 1: Pre-Contact Settlement History of Ontario
(Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

Sub-Period	Timespan	Diagnostic Features	Characteristics
Palaeo			
Early Palaeo	9000–8400 BC	Fluted points; Gainey, Barnes, Crowfield	Arctic tundra and spruce parkland; Small mobile groups move into southern Ontario; Focus on seasonal resources and large territories; Hunted some big game and herd animals; Sites are rare and typically found along glacial features (e.g., glacial lake shorelines/strandlines); Northern Ontario virtually unoccupied due to retreating glaciers and associated glacial lakes (e.g., Lake Algonquin)
Late Palaeo	8400–7500 BC	Non-fluted and lanceolate points; Hi-Lo, Holcombe, Plano	Gradual population increase; Smaller territories; Campsite/way-station sites; Majority of northern Ontario remained uninhabited; First tangible signs of mobile groups of hunters/gatherers appear ca. 8000 BC on the Algonquin shoreline
Archaic			

Sub-Period	Timespan	Diagnostic Features	Characteristics
Early Archaic	7500–6000 BC	Side-Notched, Corner-Notched points (e.g., Nettling); Bifurcate points	As the glaciers melted and retreated, people expanded into the emerging landscape of the Canadian Shield; Small nomadic hunting groups with some gathering; Increased diversity of stone tool types, such as ground stone tools shaped by polishing and grinding (e.g., axes and chisels); Growing population
Middle Archaic	6000–2500 BC	Stemmed points (e.g., Kirk); Brewerton Side- and Corner-Notched points	More localized tool sources; Increased ritual activities; Polished/ground stone tools; Net-sinkers common; Earliest copper tools; Increasing regionalization
Late Archaic	2500–900 BC	Narrow Point (e.g., Lamoka), Broad Point (e.g., Genesee) and Small Point (e.g., Crawford Knoll)	Environment similar to present; Larger site sizes and less mobility; Use of fish-weirs; First evidence of cemeteries; Stone pipes emerge;
Woodland			
Early Woodland	900–400 BC	Expanding stemmed points; Meadowood points; Cache blades; Pop-eyed birdstones; Vinette ceramics	Introduction of pottery; Bands of up to 35 people; Spring congregation/fall dispersal; Exchange and interaction networks broaden
Middle Woodland	400 BC–600 AD	Dentate and pseudo-scallop shell ceramics	Ceramics continue but many are undecorated (Vinette II); Small camp sites and seasonal village sites; Influences from northern Ontario and Hopewell area to the south; Incipient agriculture in some areas; Longer term settlement occupation and reuse; Long distance trade networks
Transitional Woodland	AD 600–900	Cord-wrapped stick ceramics	Adoption of maize horticulture at the western end of Lake Ontario; Oval houses and beginning of longhouses
Late Woodland	AD 900–1600	Levanna, Saugeen, Nanticoke Notched points	Maize horticulture spread beyond the western end of Lake Ontario; Algonquian-speaking peoples resided in the Georgian Bay area and were primarily mobile hunter and gatherers residing in small groups; Fur trade begins ca. 1580; Regional warfare; European trade goods appear; Longhouses appear in some areas in the early 17 th century; Some large, palisaded villages

Historically, based on both oral traditions and archaeological findings, the entire present-day Bruce Peninsula, also known as the "Saugeen Peninsula", was inhabited by the Chippewas of Saugeen Ojibway Territory. Iroquoian-speaking groups, such as the Wyandotte/Wendat Nation and the related Petun also inhabited the area. An ancestral Petun village was present at Port Elgin in the 14th century and consisted of 12 longhouses with a posited population of 500. It is believed that this village was a trading post with the Algonquian speaking people to the north (Plain 2018:1).

To date there have been no Palaeo sites found near the study area, though the Bruce Peninsula was actively utilized during the subsequent Archaic period as the ice sheet continued to recede and the climate warmed. Notably, before the identification of the five archaeological sites addressed in this report, only three Indigenous archaeological sites had been registered within

the geographic township of Greenock. This scarcity may be attributed to the predominantly swampy terrain, insufficient archaeological surveys, or a combination of both factors.

The nearest sites within 10 km of the study area include the McDuff site (BbHj-7), an Archaic campsite recorded in the 1950s on the north bank of a tributary 6.3 km to the northeast, and BbHi-35, a Middle and Late Archaic findspot. The Woodland Period is represented by the Penetangore site (BaHj-4) an Early Woodland campsite on the north bank of the Penetangore River, northwest of Bervie, the Fighting Pigeon site (BaHi-4) an Early Woodland campsite by Clam Lake, and the Bannerman site (BaHi-1) a Late Woodland campsite approximately 6.7 km to the southwest.

1.2.2 Post Contact Settlement History

The Post-Contact period is associated with the arrival of European explorers and traders at the beginning of the 17th century. Shifts in Indigenous lifeways (e.g., settlement size, population distribution and material culture) were triggered by the encroachment of European settlers on Indigenous territories. The study area falls within the lands surrendered by Treaty #45 1/2, the Saugeen Tract Purchase, which was signed on August 9, 1836, by certain Anishinaabe peoples and representatives of the Crown. The territory described in the written treaty covers approximately 1.5 million acres of land, and was a part of the Bond Head Purchases, along with Treaty #45 for Manitoulin Island.

There is an abundance of Euro-Canadian documentation for this period, including the written accounts of early explorers, missionaries and traders, early survey plans and township maps. For the purpose of discussion, the Post-Contact period can be categorized by major historical events (Table 2).

Table 2: Post-Contact Settlement History of Ontario

(Smith 1846; H. Belden & Co. 1880; Coyne 1895; Robertson 1906; Middleton 1927; Lajeunesse 1960; Ellis and Ferris 1990; Winearls 1991; Surtees 1994; AO 2023)

Historical Event	Timeframe	Characteristics
Early Contact	Early 17 th century	Early explorers include Brûlé in 1610, Champlain in 1613 and 1615/1616; Jesuit and Recolléts missionaries; Algonkian-speakers (Anishinabeg) and Iroquoian-speakers (Huron, Petun and Neutral) are encountered; Traditional Indigenous tools begin to be replaced by European wares
Five Nations Invasion	Mid-17 th century	Five Nations (Haudenosaunee) invade ca. 1650; Neutral, Huron-Wendat and Petun Nations are defeated/displaced; Haudenosaunee establish settlements along northern shoreline of Lake Ontario; Expansive Iroquoian hunting territory established in the west during the second half of the 17 th century; European fur trade and exploration continues

Historical Event	Timeframe	Characteristics
Trade, Peace and Conflict	Late 17 th and mid-18 th century	Anishnabeg (Ojibway, Odawa and Potawatomi) expand into Haudenosaunee lands ca. late 17 th century and trade directly with the French and English; Nanfan Treaty in 1701 between the British and Haudenosaunee, which placed their beaver hunting grounds under protection of the British Crown; Growth and spread of the fur trade; Merchants and traders from France and England arrive; Early routes followed Indigenous pathways; Early trading posts at strategic locations along well-traveled river routes; Beginnings of the Métis and their communities; Treaty of Utrecht in 1713 brought peace between the French and English; Eventual hostilities between the French and British lead to the Seven Years' War in 1754; French surrender in 1760
British Control	Mid-18 th century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land and hunting grounds, though also provided a way through which these rights could be taken away First land cessions covered small parcels of land and were more concerned with security and trade than settlement; First land cession was the Seneca surrender of the west side of the Niagara River in August 1764
British Administration	Late 18 th century	The American Revolutionary War (1775–1783) led to influx of United Empire Loyalist, military petitioners and groups that faced persecution (e.g., Mennonites) to settle in Upper Canada; Constitutional Act of 1791 creates Upper and Lower Canada; Majority of future Peterborough County acquired as part of the Rice Lake Purchase (Treaty #20) in 1818; Eastern part acquired as part of the Rideau Purchase (Treaty #27 and #27 1/4) in 1819 and confirmed in 1822; Large tracts of land opened for settlement after land cessation treaties negotiated by the Crown with various First Nations groups
County Development	Mid-19 th century	Initially an area of unknown designation referred to as the “Queen’s Bush”; First settlers in the area squatted on lands prior to any formal survey; Became part of the Huron District in 1846; In 1849 the Huron District was divided into the counties of Huron, Perth and Bruce; County fully established by 1867; Survey of the Durham Road led to settlement expansion; Land cessations included the Saugeen Tract Purchase in 1836, the Half Mile Strip in 1851, and the Saugeen Peninsula Treaty in 1854
Township Formation	Mid-19 th century	Greenock is a gore township; Majority of township is composed of the Greenock swamp; Settlement was slow due to difficulty in building roads through the swampland; First settlers were Joseph Chartrand and John Caskanette, French-Canadians that settled in the Riversdale area in 1850; Lots along the Durham Road were surveyed in 1851, the remainder of the township completed by 1852; First mill on the Teeswater River was built by John Valentine in 1852 at Paisley; John Shennan built a mill a year later at Pinkerton that he sold to David Pinkerton; Additional mills at Chepstow and Riversdale by 1857
Township Development	Mid- to late 19 th century	Lands contained in the Greenock swamp, as well as the Culross swamp, sold at the Court House in Walkerton in 1871; The lands were purchased by seven buyers, though by 1879 almost all of the Greenock swamplands was owned by Henry Cargill; Cargill built a lumber empire and cut drains and canals in the swamp as part of his lumbering operations; Settlements at Paisley, Cargill, Chepstow, Glamis, Riversdale, Enniskillen

In 1649, the Seneca, alongside the Mohawk, conducted a campaign in southern Ontario that resulted in the dispersal of the Huron-Wendat, Tionontate (Petun), and Attiwandaron (Neutral) Nations (Heidenreich 1978). Around the same time, certain Odawa groups migrated from the Bruce Peninsula to settle in the vicinity of the Straits of Mackinac. In A.D. 1670/1671 some Odawa populations moved to Manitoulin Island along with some Mississauga populations (an Ojibway Nation) (Feest and Feest 1978:772-773; Rogers 1978:761). Together with the Pottawatomi, the Ojibway and Odawa constituted a political confederacy known as the Three Fires (Feest and Feest 1978:777).

The Seneca, with the Mohawk, led a campaign into southern Ontario in AD 1649, which dispersed the Huron-Wendat, Tionontate (Petun) and Attiwandaron (Neutral) Nations (Heidenreich 1978). During this period some Odawa populations dispersed from the Bruce Peninsula and moved to the lands around the Straits of Mackinac. In A.D. 1670/1671 some Odawa populations moved to Manitoulin Island along with some Mississauga populations (an Ojibway Nation) (Feest and Feest 1978:772-773; Rogers 1978:761). Together with the Pottawatomi, the Ojibway and Ottawa constituted a political confederacy known as the Three Fires (Feest and Feest 1978:777).

In the latter part of the 17th century, the region of the study area was a contested territory between Ojibway Nations and the Mohawk Iroquois Nation. Ojibway oral tradition records several battles throughout Bruce County, focused up the Saugeen River Valley, that led to a decisive confrontation at Saugeen (present Southampton), called the Battle of Skull Mound (Schmalz 1991:22–23). After the defeat of the Iroquois some Ojibway settled in the area.

Throughout the 18th century the Saugeen Territory was inhabited by several generations of the Ojibway, including the Wahbadicks, the Newashes, the Wahwahnos, and the Metegwob who fished, trapped, and hunted along the many rivers, streams and lakes of their lands. (Schmalz 1977:2–9). Groups of displaced refugees from the United States, such as the Potawatomi from Michigan and Wisconsin, established new homes at various reserves in Ontario, including Cape Croker and Saugeen.

The study area falls within the traditional territory of the Saugeen Ojibway Nation (SON), which consists of the Saugeen Ojibway First Nation and the Chippewas of Nawash Unceded First Nation. The people of SON reside in the SON Traditional Territory, known as Anishnaabekiing. This traditional territory includes the Saugeen Peninsula (also known as Bruce Peninsula), the waters and islands of Lake Huron and Georgian Bay and extends to the south and to the east into the watersheds of Maitland and Nottawasaga Rivers (SON 2011). The historical Saugeen Métis can trace their origins to early traders at Saugeen, including Pierre Piché. The Métis community in the region of the study area is first referenced historically in 1798 and was primarily focused at Saugeen (Southampton).

The Queen's Bush

The Queen's Bush refers to a region within the Bruce Peninsula in Ontario, named after Queen Victoria, who reigned during the mid-19th century. In 1847, the colonial government initiated the process of making the Queen's Bush lands available for settlement due to the existing arable land being mostly occupied (Robertson 1906:11). Over the course of 1847 and 1848, preliminary plans were developed for the subdivision of the Queen's Bush into townships.

The Queen's Bush attracted Black settlers, many of whom were former slaves, as well as white settlers, of various religious affiliations, looking for opportunities in Upper Canada. Life in the Queen's Bush was challenging, as settlers had to clear land, build homes, and establish farms from scratch. The dense forests and rugged terrain made this a labor-intensive and demanding

endeavor. Pioneer families in the Queen's Bush had to be self-sufficient. They grew their own crops, raised livestock, and relied on hunting and fishing for food. They also had to produce their own tools, clothing, and other necessities, as access to stores and markets was limited. Despite the isolation, a sense of community thrived in the Queen's Bush. Settlers often helped each other with tasks such as barn raising and land clearing (Brown 1932).

Settlement roads, also referred to as colonization roads, were essential for connecting the isolated settlements within the Queen's Bush to the broader transportation network of Upper Canada. These roads were typically rudimentary, often little more than cleared paths through the dense forests. By 1851 the Durham Road (present Highway 4/9) had been established, albeit a rough trail, from the village of Durham westward to the mouth of the Penetangore River. Other settlement roads included the Garafraxa Road (present Highway 6), Goderich/Southampton Road, and the Southampton/Owen Sound Road. Once these roads were opened, they provided settlers access to the newly surveyed townships.

1.2.3 Historic Mapping and Imagery Review

Overview

Historic atlas maps typically provide limited information on land tenure and historic features, as they were primarily produced to identify notable structures, such as churches and schoolhouses, as well as the residences and landholdings of subscribers. As a result, landowners who did not subscribe were not always listed on the maps, and therefore, not all structures were necessarily depicted or placed accurately (Gentilcore and Head 1984). Furthermore, historic mapping reviews face accuracy challenges due to georeferencing errors caused by changing fixed locations, scale issues, and the idealized nature of historic cartography, leading to inconsistencies in translating historic maps into real space.

Analysis

Available historic mapping and orthoimagery were examined to determine the extent and nature of development and land uses within the study area. Specifically, the following resources were consulted:

- *Map of Greenock Township* (1880);
- Topographic map (1946); and
- An aerial image (1954)

The *Map of Greenock Township* (1880) does not depict any structures or land owners in the study area (Figure 2). It delineates the Teeswater River running through the lot, Bruce Road 20 as an unopened road allowance, and the Greenock swamplands a few lots to the west. The 1946 topographic map shows the study area comprised cleared land bordered by a woodlot to the north (Figure 3). Further confirmation of the actively cultivated lands comes from the 1954 aerial image (Figure 4). The land use at the time of assessment can be classified as agricultural.

1.2.4 Land Use History of the Study Area

The study area is located within part of Lot 15, Concession 5, in the geographic township of Greenock. The Crown Patent for the lot was granted to William Thompson in 1869. Several mortgages were taken out by Thompson between 1869 and 1895. According to the 1871 agricultural census, of the 100 acres, 25 were improved and 7 were in pasture. Thompson farmed spring wheat, barley, peas, potatoes, hay, and that year produced 60 pounds of maple sugar. His livestock included two working oxen, 3 milk cows, 3 other horned cattle, 10 sheep, and 3 swine, while the animal products he produced included 4 cattle, 6 sheep, and 5 swine killed or sold for slaughter or export, 100 pounds of butter, 60 pounds of wool. He also produced a small number of furs, including 6 muskrat and 5 mink furs.

After Thompson's death, the lot was willed to his son William Jr in 1898. William Jr. kept the property until he sold it to Joseph Schurter in the early 1900, possibly 1913 (the exact date is obscured in the records). Shurter and his wife sold the property to Ralph and Anna Shurter (joint tenants) in 1947 for \$6000, who kept the property until 1992 when they sold it to David and Linda Doede, who leased the land to Ikendale Farms Ltd.

1.3 Archaeological Context

The purpose of this section is to provide background research with regards to previous archaeological fieldwork conducted within, and in the vicinity of, the study area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions.

The Stage 1 and 2 assessments were conducted concurrently between September 20 to 22, 2023 under PIF #P1033-0028-2023, whereas the Stage 3 site-specific assessments of the five Indigenous sites were conducted between October 23 and November 17, 2023 under PIF #P1033-0037/0038/0039/0040/0041-2023. Soil conditions were ideal during the investigation. 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, etc.).

1.3.1 Current Conditions

The study area is irregular in size and is bounded by a woodlot to the north, the Teeswater River to the east and south, and Bruce Road 20 to the west. The study area is an agricultural field adjacent to the Teeswater River. The topography varies from nearly level to gently undulating to gently rolling. The slope class ranges from gentle to smooth moderate, and the degree of slope can be categorized as a slope class of A/B. Surface elevation ranges from 272 m in the northeast, 267 m in the southeast, 276 m in the southwest, and 277 m in the northwest.

1.3.2 Natural Context

1.3.2.1 Paleozoic Geology

Formations, the units of stratified rocks, are bodies of rock that consist of a certain lithology (rock type) or a combination of lithologies. Formations can be divided into members or combined into groups. In terms of paleozoic geology, the strata of the study area belong to the Detroit River Group, specifically, the Amherstburg formation, which consists of limestone and dolostone. Bedrock outcrops occur along the Teeswater River between Chepstow and Pinkerton. The rocks consist of cherty limestones up to 45 m thick (Cowan and Pinch 1986).

Mapping of surficial geology indicates the majority of the study area consists of coarse-textured glaciolacustrine deposits comprised of sand, gravel, and minor silt and clay, alongside a small pocket of ice-contact stratified deposits in the northwestern corner of the study area

The study area lies within a potential karst, which are defined as regions of carbonate bedrock that are most vulnerable or susceptible to karstification. Karsts are characterized by sink holes, caves, underground channels, and pitting of the surface rock. Rocks with the highest solubility in water include limestone, dolostone, gypsum, and rock salt. The largest and most complex karst landforms are found in limestone and dolostones, as they have sufficient structural strength to maintain openings, such as caves. The Bruce Peninsula has the largest and most diverse assemblage of karst landforms in Ontario and is considered one of the major dolostone karsts of the world (BGGC 2006).

1.3.2.2 Prehistoric Shorelines

Changes in water levels must be considered when discussing potential site locations within the Bruce Peninsula. Following the last glacial retreat around 12,000 years ago, Proglacial Lake Algonquin would have submerged much of the peninsula. Viable dry land would only have emerged with the drainage of the lake around 10,000 to 9,000 years ago, leading to the subsequent formations of Lake Stanley to the west and Lake Hough to the east. Subsequently, the shoreline regions of the Bruce Peninsula would have been inundated during the initiation of the Nipissing Transgression around 7,500 to 5,000 years ago leading to the destruction of many earlier sites. The receding water levels would eventually lead to the formation of Lake Huron and its modern shoreline. The specifics of the timing can vary somewhat based on geological and archaeological evidence.

The sequence and change of lake levels in the Great Lakes basins is continually being interpreted and reinterpreted. One area of research has been on the relationship between Palaeo occupations and ancient water levels in the Lake Huron basin. Specialized environments likely occurred on abandoned lake plains and strandlines, particularly as the forests began to close and create significant regional change. These cool, low and wet habitats were likely attractive to Palaeo populations as they had more open areas, specific types of vegetation and diverse habitats for grazing animals, such as caribou (Jackson et al 2000:416, 433).

In the Archaic period of Ontario's archaeological history, the Lake Nipissing high water stage of Lake Huron and Georgian Bay experienced a notable rise, reaching a level that transformed the upper peninsula, somewhere around Lion's Head, into a distinct and isolated island. This significant shift in water levels had profound implications for the landscape and the human communities inhabiting the region at that time.

As the waters gradually receded distinctive features that are observable in the present-day peninsula were left behind. The receding waters played a crucial role in the formation of the sand and/or cobble strandlines that characterize the landscape today. These strandlines, composed of sedimentary materials such as sand and cobblestones, mark the former shorelines of the ancient Lake Nipissing high water stage.

According to Cowan and Pinch (1986), the Lake Algonquin beach comprises an erosional bluff south and north of Kincardine and a barrier bar at Kincardine which is at about 203 m in elevation. The Lake Nipissing Beach is primarily an erosional bluff fronted by thin beach gravel and sand. The Nipissing bluff has an elevation about 184 m at Kincardine. The study area has a surface elevation that ranges from 267 m to 277 m. There is no potential for the shorelines of either prehistoric Lake Algonquin or Lake Nipissing near the study area.

1.3.2.3 Physiography

The study area is located in the Horseshoe Moraines physiographic region. This region is characterized by rolling hills, moraines, and glacial landforms. It extends in a crescent shape, resembling a horseshoe, and is primarily composed of glacial deposits left behind by the last ice age. The region features fertile soils and diverse landscapes, with forests, wetlands, and agricultural areas. The moraine plays a crucial role in groundwater recharge and provides habitat for various plant and animal species. (Chapman and Putnam 1984:127).

1.3.2.4 Forest Region

The study area lies within the Great Lakes-St. Lawrence Forest region, which is also known as the Mixedwood Plains ecozone. This region is a broad transition zone between the coniferous Boreal Forest to the north and the deciduous Carolinian Forest to the south. This forest is dominated by hardwood forests, such as maple, oak, yellow birch and white and red pine. Typical species that can be found on upland surfaces include sugar maple, American beech, American basswood, yellow birch, eastern hemlock, eastern white pine, red maple, red oak, and white ash. Drier stretches of land commonly exhibit white spruce, which replaced the red pine and white pine. In the northern section of this region, on thin soils, and on high ground, species more representative of a Boreal Forest persist. These include white spruce and black spruce interspersed with balsam fir, scrubby stands of jack pine, trembling aspen, red oak, and paper birch. Much of the forest is uneven aged, meaning that immature and mature trees can be found within the same group of trees. This region is home to a wide variety of wildlife, including black bear, wolves, white-tailed

deer, moose, small mammals such as beaver and otter and various migratory birds (MNRF 2023a).

Only part of the original forest cover remains standing today, however, as early Euro-Canadian agriculturalists conducted large-scale clearing operations to prepare the land for cultivation. Specifically, in Bruce County, lumbering was the chief activity and the timber industry in the area has removed most of the old stands of pine, spruce, and hardwoods. The main forest association for the study area is hard maple and beech. Secondary growth of silver birch and poplar is commonly found on the coarse-textured well drained soils after the original maple-beech vegetation has been removed (Hoffman and Richards 1954:29).

1.3.2.5 Ecodistrict

The study area falls within the Mount Forest ecodistrict 6E-5, which encompasses 867,659 ha of land and extends from the community of Clavering in the north to Monkton in the south, and from Bervie in the west to Shelburne in the east. It features deep morainal deposits and large drumlin fields. Portions of this district were among the first areas to become permanently uncovered as the glacier receded, and glaciofluvial features (e.g., spillways, eskers) are scattered throughout the ecodistrict (MNRF 2018:326–327).

1.3.2.6 Soils

Soil is a complex mixture of minerals, organic matter, water, air, and living organisms found on the Earth's surface. It forms through a process called weathering, which involves the breakdown of rocks and minerals over time due to physical, chemical, and biological processes. The chemical and physical composition of the mineral parent material (the rocks and minerals from which soil forms) influences profile development. Different types of parent materials can result in soils with distinct properties and characteristics, and the movement of soil water within the profile affects the amount of leaching to which the soil is subjected.

The Ontario Soil Survey of the region indicates the study area consists of Harriston silt loam soils. Harriston soils developed on medium textured till and are characterized by good drainage (Hoffman and Richards 1954:58).

1.3.2.7 Hydrology

The study area is within the Teeswater River Outlet watershed (MNRF 2023b). The Teeswater River is 75 km in length and drains a total area of 683 square km. Tributaries include the Greenock, Formosa, Alps, Plum, Kinlough, Schmidt, and Allen Creeks (SVCA 2021). The nearest potable water source is the Teeswater River which abuts the study area in the east and south. A swamp (part of the Greenock Swamp Wetland Complex) is also present immediately to the north.

Greenock Swamp

The Greenock Swamp Wetland Complex covers over 8,093 ha of land in the western portion of Brockton. It is the single largest forested wetland in southern Ontario. This remarkable ecosystem is recognized for its capacity to function as a massive sponge, releasing water during droughts and absorbing water during heavy rainfall. The swamp harbors a rich diversity and abundance of wildlife, including significant species such as the carnivorous Pitcher and Sundew Plants, as well as bald eagles and various other species (Municipality of Brockton 2023).

1.3.3 Archaeological Management Plan

Per Section 1.1, Standard 1 of the 2011 S&Gs, when available, an archaeological management plan (AMP) or other archaeological potential mapping must be reviewed. The County of Bruce does not currently have a publicly available AMP; however, one has been prepared and should become available soon.

1.3.4 Registered or Known Archaeological Sites

A search of registered archaeological sites within the MCM Ontario Archaeological Sites Database (OASD) was conducted to determine if any registered or known archaeological resources had been identified within a minimum 1 kilometre distance of the study area limits. This database contains archaeological sites registered within the Borden system. The Borden system is based on a block of latitude and longitude. A Borden block measures approximately 13 km east to west by 18.5 km 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 is within Borden block BaHh.

The search did not result in the identification of any known archaeological resources within a 1 kilometre radius. The nearest site is BaHh-1, a Euro-Canadian refuse deposit of no further CHVI.

1.3.5 Previous Archaeological Research

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 study area. The investigation determined that there are no available reports documenting previous archaeological fieldwork within the specified distance.

2.0 STAGE 1 BACKGROUND STUDY

The Stage 1 assessment included review of archival sources, historical maps and aerial imagery, publications and online databases to document local geography, history, previous fieldwork and current land conditions. GLA confirms that the standards for background research outlined in Section 1.1 of the 2011 S&Gs were met. The research results are summarized below.

The general area has a rich Pre-Contact and Post-Contact history (Section 1.2). As outlined in Section 1.3.2 the study area would have been attractive to Indigenous and Euro-Canadian populations. The diversity of the local vegetation would have provided an ideal habitat for a variety of fauna. The proximity to the Teeswater River, would have been attractive to both Indigenous and Euro-Canadian populations.

The absence of documented Indigenous and Euro-Canadian archaeological sites within 1 km of the study area reflects a shortage of archaeological assessments instead of a lack of presence (Section 1.3.4). Likewise, background research did not identify any areas of previous assessment within the study area, or within 50 m of the study area (Section 1.3.5).

2.1 Field Methods: Property Inspection

The Stage 1 and 2 archaeological assessments were carried out concurrently. Accordingly, the visual inspection was conducted over the course of the Stage 2 property survey and has been summarized in Section 3.0.

2.2 Analysis and Conclusions

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Section 1.3 of the S&Gs outlines criteria to be followed when evaluating archaeological potential. The following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites within a 1km radius of the Study Area;
- Water sources whether primary (lakes, rivers, creeks), secondary (intermittent streams, creeks, springs, marshes, and swamps);
- Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or streams or channels indicated by a clear dip or swale in the topography, shorelines or drainage lakes or marshes, cobble beaches);
- Accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh);
- Elevated topography (e.g., eskers, drumlins, large knolls, plateau);
- Pockets of well drained sandy soil especially near areas of heavy soil or rocky ground;
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may

be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings;

- Resource areas, including food (e.g., migratory routes, spawning areas) or medicinal plants, scarce raw materials (e.g., quartz, copper, ochre, chert outcrops), early Euro-Canadian industry (e.g., fur trading, logging, prospecting, mining);
- Areas of early Euro-Canadian settlement, including:
 - Places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks;
 - Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes);
 - Property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or site; and
 - Property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations.

2.2.1 The Importance of Water

Access to potable water is vital for sustained human habitation. Since the Pleistocene era, water sources have generally remained stable in southern Ontario. Accordingly, proximity to an accessible water source holds significance for predictive modeling and assessing archaeological potential. Apart from potability, for the Indigenous populations in Southern Ontario, waterways also served diverse roles, acting as transportation routes, trade networks, food and plant resources, culturally significant spaces, and determinants of settlement patterns.

Rivers and lakes served as natural highways, allowing Indigenous communities to travel efficiently across the landscape. Canoes and other watercraft were pivotal for transportation, enabling the movement of people, goods, and information. These water routes interconnected various regions, facilitating trade and cultural exchange. Additionally, waterways were also key conduits for trade networks, enabling the exchange of raw materials, tools, pottery, and foodstuffs along riverbanks and lake shores.

The rich aquatic ecosystems of rivers and lakes were a significant source of sustenance for Indigenous populations, supporting fishing, waterfowl hunting, and the gathering of freshwater plants. Moreover, water bodies hold deep cultural and spiritual significance for Indigenous communities. Many ceremonies, rituals, and traditions are associated with water, reflecting a profound connection to these natural features.

Indigenous settlements were often strategically established near water sources, providing easy access to transportation, food resources, and trade routes. These waterfront locations served as natural defenses and were conducive to various cultural practices and ceremonies. The connection between Indigenous communities and waterways was multifaceted, encompassing practical, cultural, and spiritual dimensions.

2.2.2 Archaeological Potential of the Study Area

The results of the Stage 1 background study suggest that the study area has several features indicating archaeological potential. Specifically, the study area meets the following criteria:

- Water sources: primary, secondary, or past water source (Teeswater River, part of the Greenock Swamp Wetland Complex);
- Resource areas (fish, land-based mammals and birds, freshwater plants, medicinal plants, logging);

Based on the visual inspection and background research it was determined that the study area has archaeological potential for either Indigenous or Euro-Canadian archaeological resources. Background research did not identify any features indicating that the study area had potential for deeply buried archaeological resources.

3.0 STAGE 2 PROPERTY ASSESSMENT

3.1 Field Methods

The Stage 2 archaeological assessment of the study area consisted of a visual inspection, pedestrian survey and test pit survey in all areas of archaeological potential (Table 3). Weather conditions were ideal, providing good visibility of the soil and land features. GLA confirms that fieldwork was conducted 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 3: Summary of Fieldwork (Stage 2)

Date	Activity	Lighting	Cloud Cover	Precipitation	Temperature (°C)
20/09/2023	Pedestrian survey, identification and intensification of Site 1	Bright	Partly cloudy	None	21
21/09/2023	Pedestrian survey, identification and intensification of Sites 2–4	Bright	Partly cloudy	None	22
22/09/2023	Pedestrian survey, identification and intensification of Site 5, test pit survey along bank of the Teeswater River	Bright	Partly cloudy	None	24

3.1.1 Visual Inspection

The study area was visually inspected in accordance with the requirements set out in Section 1.2 of the 2011 S&Gs. As per Section 1.2, Standard 6 of the 2011 S&Gs, during a property inspection identify and document structures and built features that will affect assessment strategies (e.g., heritage structures or landscape, cairns, monuments, or plaques, cemeteries, etc). There are no historic structures or built features within the vicinity of the study area.

The inspection did not identify any areas of disturbance within the study area (Image 1–Image 3). No natural features (e.g., permanently wet lands, sloped lands, etc.) that would affect assessment strategies were identified. No additional features of archaeological potential not visible on mapping were identified.

3.1.2 Pedestrian Survey

The agricultural field was assessed by means of a pedestrian survey. The criteria outlined in Section 2.1.1 of the 2011 S&Gs guided the fieldwork, necessitating recently ploughed fields, well-weathered soils, and at least 80% visibility of the ploughed ground surface. The survey was conducted along parallel transects with a maximum interval of 5 m (Image 4).

The pedestrian survey resulted in the identification of 5 locations of archaeological materials: Sites 1–5. Subsequent to the pedestrian survey, an intensified pedestrian survey and Controlled Surface Pick-up (CSP) were executed at each site, aligning with Section 2.1.1, Section 3.2.1, and

Section 7.9.1 of the 2011 S&Gs. In the intensified survey, transect intervals were reduced to 0.5 m. A thorough ground inspection was conducted within a minimum 20 m radius around initial finds to assess if they formed part of a larger scatter. For identified larger scatters, the interval was continued until the full extent of the site was determined. All artifact stations were flagged, recorded with a GPS device, and spatial relationships were documented. All artifacts were collected, and site relocation can be facilitated using associated GIS and mapping data.

3.1.3 Test Pit Survey

A test pit survey was conducted on a narrow strip of land along the bank of the Teeswater River. Due to reduced visibility caused by the proximity to the bank, the plough was unable to effectively cover the area (Image 5–Image 6). Following Section 2.1.2 of the S&Gs, each test pit was hand excavated with a minimum diameter of 30 cm and into the first 5 centimetres of subsoil. Test pits were spaced at maximum intervals of 5 metres apart since the areas to be tested were located less than 300 m from any feature of archaeological potential. Depths varied between 55 and 60 cm. Each test pit was examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 mm width. All test pits had natural soil profiles comprised of medium brown to greyish-brown silt loam ploughzone overlying yellowish orange to orangish-brown sandy loam subsoil. No archaeological material was identified during the survey. All test pits were backfilled.

In terms of field methods, approximately 98% of the study area was subjected to pedestrian survey, while the remaining 2% was subject to test pit survey at 5 metre intervals. The results of the Stage 2 archaeological survey are presented in Figure 5–Figure 6.

3.1.4 Artifact Documentation

The identified archaeological resources were documented on field maps, described in field notes and documented with a GPS unit in accordance with Section 5.0 Standard 2 of the 2011 S&Gs. All maps and data containing site location information is in the Supplementary Documentation (SD) accompanying the project report package. As required by Table 7.1, Section 7.8.2 and Section 7.8.3 of the 2011 S&Gs, distinct Record of Finds and Analysis and Conclusions discussions are presented in Section 3.2–Section 3.6.

Detailed analyses of the retained finds were conducted to achieve three key objectives: 1) record the materials, 2) provide the basis for recommendations, and 3) gain valuable information for future researchers. The finds were categorized using a typological system, which aligns with the Nomenclature for Museum Cataloging (2018). Indigenous artifacts are classified by artifact material and type. Chert types are determined following Cherts of Southern Ontario (Eley and von Bitter 1989) and Ontario Cherts Revisited (Fox 2009), and lithic artifacts are classified according to the definitions outlined in Lithic Analysis (Odell 2004) and Lithics: Macroscopic Approaches to Analysis (Andrefsky 2005). Indigenous ceramics are classified by function (e.g., vessel or pipe) and portion (e.g., rim, body, etc.).

Euro-Canadian artifacts are categorized by class, material, object group, and object name using various reference sources (e.g., Chenoweth 2016; Lindsey 2023). The classes are designed to represent related behaviors and activities associated with their general functions. For instance, the classes encompass various aspects of daily life, like "Foodways," which covers items related to food preparation, storage, and consumption. Similarly, the "Architectural" class serves as a broad category encompassing items such as bricks, nails, and window glass, among others. These classes are further subdivided into object groups, each of which pertains to more specialized activities. For example, within the "Architectural" class, there are groups such as construction materials, nails, and window glass. This systematic classification of archaeological materials allows for the identification of broader historical trends related to how a particular area was utilized in the past. Image 17 provides a visual representative of all artifacts recovered and the catalogue entries appear in Appendix B Appendix B.

The recovered artifacts were washed, catalogued, and analyzed and are currently stored in a bankers box at 891 27th St E, Owen Sound, Ontario. The artifacts and documents will be stored by GLA until arrangements can be made to transfer them to an MCM approved storage facility.

3.2 Teeswater site (BaHh-2)

3.2.1 Record of Finds

The Teeswater site, initially referred to as Site 1, was identified during the pedestrian survey in the south of the agricultural field, on the bank of the Teeswater River. The site consisted of an isolated Indigenous artifact on the field surface in a relatively flat area.

The Indigenous artifact consisted of a biface manufactured of unknown chert, though it shares characteristics similar to Kettle Point chert. It measures 58 mm in length, 22 mm in width, and 7 mm in thickness, though the tip is missing, having been broken off at some point by past ploughing activities.

The biface did not exhibit evidence of heat alteration and was not diagnostic. No cultural features or structural elements of potential CHVI were identified. The deposit was isolated; therefore, no area of artifact concentrations was observed.

3.2.2 Analysis and Conclusions

The results suggest that the Teeswater site is an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The find consisted of a biface manufactured of unknown chert. The artifact was not diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9000 BC–AD 1650). The function of the site is unclear. Following evaluation against the criteria outlined in the SON 2011 *Standards*, the Teeswater site is of further CHVI and necessitates a Stage 3 site-specific assessment. Specifically, Section 6.2 of the 2011 SON *Standards* requires enhanced, area-specific

archaeological standards within the traditional territory, including Stage 3 site-specific assessments regardless of size or artifact density.

3.3 Site 2 (BaHh-3)

3.3.1 Record of Finds

Site 2 was identified during the pedestrian survey in the west-centre of the agricultural field, on a small knoll. The site consisted of an isolated Indigenous artifact on the field surface in a relatively flat area.

The Indigenous artifact consisted of a biface thinning flake of Saugeen chert (Bois Blanc formation). The flake shows evidence of plough damage (breakage), though retains evidence of a flat striking platform.

The biface thinning flake did not exhibit evidence of heat alteration and was not diagnostic. No cultural features or structural elements of potential CHVI were identified. The deposit was isolated; therefore, no area of artifact concentrations was observed.

3.3.2 Analysis and Conclusions

The results suggest that Site 2 is an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The find consisted of a biface thinning flake manufactured of Saugeen chert. The artifact was not diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9000 BC–AD 1650). The function of the site is unclear. Following evaluation against the criteria outlined in the SON 2011 *Standards*, Site 2 (BaHh-3) is of further CHVI and necessitates a Stage 3 site-specific assessment. Specifically, Section 6.2 of the 2011 SON *Standards* requires enhanced, area-specific archaeological standards within the traditional territory, including Stage 3 site-specific assessments regardless of size or artifact density.

3.4 Site 3 (BaHh-4)

Site 3 was identified during the pedestrian survey in the northeastern corner of the agricultural field, on the bank of the Teeswater River. The site consisted of a 11 x 3 m scatter of Indigenous materials on the field surface in a relatively flat area.

The assemblage consisted of two Indigenous artifacts, including a biface thinning flake and a piece of shatter, both crafted from Saugeen chert. The biface thinning flake has a smooth ventral surface, lacks a platform, but displays visible ripple marks. Shatter refers to the fractured remains or debris resulting from the process of manufacturing stone tools.

The artifacts did not exhibit evidence of heat alteration and were not diagnostic. No cultural features or structural elements of potential CHVI were identified. No area of artifact concentrations was observed.

3.4.1 Analysis and Conclusions

The results suggest that Site 3 is a small Indigenous scatter. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The finds consisted of a biface thinning flake and a piece of shatter of Saugeen chert. The artifacts were not diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9000 BC–AD 1650). The function of the site is unclear. Following evaluation against the criteria outlined in the SON 2011 *Standards*, Site 3 (BaHh-4) is of further CHVI and necessitates a Stage 3 site-specific assessment. Specifically, Section 6.2 of the 2011 SON *Standards* requires enhanced, area-specific archaeological standards within the traditional territory, including Stage 3 site-specific assessments regardless of size or artifact density.

3.5 Site 4 (BaHh-5)

3.5.1 Record of Finds

Site 4 was identified during the pedestrian survey in the southeast of the agricultural field. The site consisted of an isolated Indigenous artifact on the field surface in a relatively flat area.

The Indigenous artifact consisted of a biface thinning flake, with feather termination, and a smooth ventral surface. It was manufactured of Kettle Point chert, though shows evidence of plough damaged (breakage). The flake lacks a platform but displays visible ripple marks.

The biface thinning flake did not exhibit evidence of heat alteration and was not diagnostic. No cultural features or structural elements of potential CHVI were identified. The deposit was isolated; therefore, no area of artifact concentrations was observed.

3.5.2 Analysis and Conclusions

The results suggest that Site 2 is an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The find consisted of a biface thinning flake manufactured of Kettle Point chert. The artifact was not diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9000 BC–AD 1650). The function of the site is unclear. Following evaluation against the criteria outlined in the SON 2011 *Standards*, Site 4 (BaHh-5) is of further CHVI and necessitates a Stage 3 site-specific assessment. Specifically, Section 6.2 of the 2011 SON *Standards* requires enhanced, area-specific archaeological standards within the traditional territory, including Stage 3 site-specific assessments regardless of size or artifact density.

3.6 Site 5 (BaHh-6)

Site 5 was identified during the pedestrian survey in the southeast of the agricultural field. The site consisted of an isolated Indigenous artifact on the field surface in a relatively flat area.

The Indigenous artifact consisted of a piece of shatter of Kettle Point chert. The chert is banded, that being a pattern of alternating layers of different colours.

The piece of shatter did not exhibit evidence of heat alteration and was not diagnostic. No cultural features or structural elements of potential CHVI were identified. The deposit was isolated; therefore, no area of artifact concentrations was observed.

3.6.1 Analysis and Conclusions

The results suggest that Site 5 is an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The find consisted of a piece of shatter of Kettle Point chert. The artifact was not diagnostic, but such finds are usually dated to the Pre-Contact period (ca. 9000 BC–AD 1650). The function of the site is unclear. Following evaluation against the criteria outlined in the SON 2011 *Standards*, Site 5 (BaHh-6) is of further CHVI and necessitates a Stage 3 site-specific assessment. Specifically, Section 6.2 of the 2011 SON *Standards* requires enhanced, area-specific archaeological standards within the traditional territory, including Stage 3 site-specific assessments regardless of size or artifact density.

3.7 Documentary and Material Record

An inventory of the documentation and materials related to this project is provided in Table 4.

Table 4: Documentary Record (Stage 2)

Document/Material	Details	Location
Field Notes	4	Digital; 891 27 th St E, Owen Sound
Photographs	27	Digital; 891 27 th St E, Owen Sound
Field Maps	1	Digital; 891 27 th St E, Owen Sound

4.0 STAGE 3 SITE-SPECIFIC ASSESSMENT

4.1 Field Methods

The Stage 3 assessments of the Teeswater site (BaHh-2), Site 2 (BaHh-3), Site 3 (BaHh-4), Site 4 (BaHh-5), and Site 5 (BaHh-6) involved test unit excavation. Weather conditions were ideal, providing good visibility of the soil and land features (Table 5). Despite an instance of sporadic light snow/rain, the soils maintained their unsaturated and unfrozen condition throughout the investigation. This weather did not hinder the ability to identify and document any part of the sites. GLA confirms that fieldwork was conducted 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: Summary of Fieldwork (Stage 3)

Date	Activity	Lighting	Cloud Cover	Precipitation	Temperature (°C)
23/10/2023	Test unit excavation (BaHh-2)	Diffuse	Partly	None	12
26/10/2023	Test unit excavation (BaHh-2)	Diffuse	Overcast	None	15
27/10/2023	Test unit excavation (BaHh-2)	Diffuse	Cloudy	None	17
01/11/2023	Test unit excavation (BaHh-5)	Bright	Partly	None	3
03/11/2023	Test unit excavation (BaHh-5 and BaHh-6)	Diffuse	Overcast	None	6
04/11/2023	Test unit excavation (BaHh-6)	Bright	None	None	9
07/11/2023	Test unit excavation (BaHh-4)	Diffuse	Overcast	Intermittent	3
10/11/2023	Test unit excavation (BaHh-4)	Diffuse	Partly	None	3
13/11/2023	Test unit excavation (BaHh-4)	Bright	None	None	8
14/11/2023	Test unit excavation (BaHh-4)	Bright	Partly	None	10
16/11/2023	Test unit excavation (BaHh-3)	Bright	None	None	12
17/11/2023	Test unit excavation (BaHh-3)	Bright	None	None	14

The Stage 3 assessment strategies for the five sites were designed to meet the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 S&Gs. A CSP for each site was previously carried out during the Stage 2 assessment. Excavation grids were laid out at each site to facilitate recording, and datum and backsight points were established in the northwest (SD Table 1). The results of the Stage 3 site-specific assessments are presented in Figure 10 and SD Figure 2–SD Figure 7. Detailed site location information appears in the accompanying SD.

4.1.1 Test Unit Excavation

The purpose of test unit excavation is to use controlled and systematic excavation to document the presence and extent of buried artifacts, structures, stratigraphy and cultural features, and to collect a representative sample of artifacts across the archaeological site. In compliance with the requirements set out in Section 3.2.2 of the 2011 S&Gs, all the test units were excavated by hand. The test unit excavation methods met the standards and guidelines for archaeological fieldwork.

The placement of test units was determined using the strategy set out in Table 3.1, Numbers 1 and 2 of the 2011 S&Gs. Following this strategy, 1 m square test units were excavated in a 5 m grid across the site and additional test units, amounting to at least 20% of the grid unit total, were excavated in areas of interest (e.g., distinct areas of high concentrations, adjacent to high-yield units, etc). Site limits were determined by low yielding and/or sterile units along the site periphery.

All one-metre test units were stratigraphically excavated during the investigation, and the resultant profiles were examined for potential features and/or evidence of fill (Image 7–Image 16). Test unit excavation did not result in the identification of any potential features at any of the sites. All units were excavated into at least the first 5 cm of subsoil. The soils were screened through mesh with an aperture of no greater than 6 mm and examined for archaeological resources. All artifacts and other remains were retained for review in the lab. The test units were backfilled upon completion. A breakdown of the total number of excavated one-metre test units by site is provided in Table 6.

Table 6: Summary of Test Unit Excavation by Site

Site (Borden)	Feature(s)	Grid	Additional	Total #
Teeswater (BaHh-2)	None	5	2	7
Site 2 (BaHh-3)	None	4	1	5
Site 3 (BaHh-4)	None	8	2	10
Site 4 (BaHh-5)	None	4	1	5
Site 5 (BaHh-6)	None	4	1	5

4.1.2 Artifact Documentation

The identified archaeological resources were recorded on field maps, described in field notes and documented with a GPS unit in accordance with Section 5.0 Standard 2 of the 2011 S&Gs. As required by Table 7.1, Section 7.9.2 and Section 7.9.3 of the 2011 S&Gs, distinct Record of Finds and Analysis and Conclusions discussions are presented in Section 3.2–3.6. The finds were classified as outlined in Section 3.1.4 and are stored in a similar manner as detailed in that section. Image 18–Image 19 provide a visual representative of all artifacts recovered and the catalogue entries appear in Appendix C–Appendix E.

4.2 Teeswater site (BaHh-2)

4.2.1 Record of Finds

The Teeswater site was found to comprise an 8.6 x 5 m (N-E) scatter of Indigenous archaeological materials. The topography and site location with regards to the study area were previously documented in the Stage 2 and can be referenced in that section. The assessment covered the entire site extent.

A total of 7 test units were excavated and unit depths ranged from 33 cm (Unit 100E:210N) to 43 cm (Unit 100E:200N). The stratigraphy consisted of an average of 32 cm of medium brown to greyish-brown silt loam ploughzone (Lot 1) overlying sandy loam subsoil in shades of yellowish-orange to orangish-brown (Lot 2). All artifacts were recovered from Lot 1.

The artifact assemblage consisted of 3 flake fragments of Kettle Point chert, all of which were collected. The artifacts did not exhibit evidence of heat alteration and were not diagnostic. No cultural features or structural elements of potential CHVI were identified.

The assessment established the Teeswater site as an Indigenous site characterized by lithic artifacts. These artifacts were retrieved from three distinct units located in the southern part of the site, nearest to the riverbank.

4.2.2 Analysis and Conclusions

The results of the Stage 3 site-specific assessment indicate that the Teeswater site represents a small Indigenous scatter. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The assemblage consisted entirely of lithic debitage, specifically three flake fragments of Kettle Point chert. While non-diagnostic, such finds typically date to the Pre-Contact period (ca. 9000 BC–AD 1650). Alongside the biface recovered in the earlier assessment, the site likely served as a brief campsite, focusing on tool kit maintenance. Its strategic location suggests it was an ideal staging area for accessing lands along the Teeswater River. These findings align with current archaeological knowledge regarding short-term campsites, characterized by small assemblages. No local parallels have been identified beyond the four sites documented in this report, likely due to limited archaeological survey coverage in the region.

Following evaluation against the criteria outlined in Section 3.4 of the 2011 S&Gs and the SON 2011 *Standards*, the Teeswater site is of no further CHVI and does not require additional assessment. Specifically, the site was low yielding, did not contain diagnostic artifacts or features, and the site and its artifacts are of relatively common types.

4.3 Site 2 (BaHh-3)

4.3.1 Record of Finds

Site 2 was found to comprise a 6 x 1.2 m (N-S) scatter of Indigenous archaeological materials. The topography and site location with regards to the study area were previously documented in the Stage 2 and can be referenced in that section. The assessment covered the entire site extent.

A total of 5 test units were excavated and unit depths ranged from 33 cm (Unit 105E:200N) to 36 cm (Unit 100E:205N and 105E:205N). The stratigraphy consisted of an average of 30 cm of medium brown to greyish-brown silt loam ploughzone (Lot 1) overlying sandy loam subsoil in shades of yellowish-orange to orangish-brown (Lot 2). All artifacts were recovered from Lot 1.

The artifact assemblage consisted of a flake fragment of Saugeen chert, which was collected. The artifact did not exhibit evidence of heat alteration and was not diagnostic. No cultural features or structural elements of potential CHVI were identified.

The assessment established Site 2 as an Indigenous site characterized by lithic artifacts. The artifact was recovered from 105E:210N in the north of the site.

4.3.2 Analysis and Conclusions

The results of the Stage 3 site-specific assessment indicate that Site 2 represents a small Indigenous scatter. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The assemblage consisted of a flake fragment of Saugeen chert. While non-diagnostic, such finds typically date to the Pre-Contact period (ca. 9000 BC–AD 1650). Alongside the biface thinning flake of Saugeen chert recovered in the earlier assessment, the site likely served as a brief campsite, focusing on tool kit maintenance. Its strategic location suggests it was an ideal staging area for accessing lands along the Teeswater River. These findings align with current archaeological knowledge regarding short-term campsites, characterized by small assemblages. No local parallels have been identified beyond the four sites documented in this report, likely due to limited archaeological survey coverage in the region.

Following evaluation against the criteria outlined in Section 3.4 of the 2011 S&Gs and the SON 2011 *Standards*, Site 2 is of no further CHVI and does not require additional assessment. Specifically, the site was low yielding, did not contain diagnostic artifacts or features, and the site and its artifacts are of relatively common types.

4.4 Site 3 (BaHh-4)

4.4.1 Record of Finds

Site 3 was found to comprise a 16 x 11 m (N-S) scatter of Indigenous archaeological materials. The topography and site location with regards to the study area were previously documented in the Stage 2 and can be referenced in that section. The assessment covered the entire site extent.

A total of 10 test units were excavated and unit depths ranged from 28 cm (Unit 100E:220N) to 44 cm (Unit 105E:235N). The stratigraphy consisted of an average of 29.7 cm of medium brown to greyish-brown silt loam ploughzone (Lot 1) overlying sandy loam subsoil in shades of yellowish-orange to orangish-brown (Lot 2). All artifacts were recovered from Lot 1.

The artifact assemblage consisted of a secondary flake and a flake fragment of Saugeen chert and a flake fragment manufactured of Kettle Point chert, all of which were collected. The artifacts did not exhibit evidence of heat alteration and were not diagnostic. No cultural features or structural elements of potential CHVI were identified.

The assessment established Site 3 as an Indigenous site characterized by lithic artifacts. These artifacts were retrieved from three distinct units, two of which were located in the eastern part of the site, nearest to the riverbank.

4.4.2 Analysis and Conclusions

The results of the Stage 3 site-specific assessment indicate that Site 3 represents a small Indigenous scatter. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The assemblage consisted entirely of lithic debitage, a secondary flake and flake fragment of Saugeen chert and a flake fragment manufactured of Kettle Point chert. While non-diagnostic, such finds typically date to the Pre-Contact period (ca. 9000 BC–AD 1650). Alongside the biface thinning flake and piece of shatter recovered in the earlier assessment, the site likely served as a brief campsite, focusing on tool kit maintenance. Its strategic location suggests it was an ideal staging area for accessing lands along the Teeswater River. These findings align with current archaeological knowledge regarding short-term campsites, characterized by small assemblages. No local parallels have been identified beyond the four sites documented in this report, likely due to limited archaeological survey coverage in the region.

Following evaluation against the criteria outlined in Section 3.4 of the 2011 S&Gs and the SON 2011 *Standards*, Site 3 is of no further CHVI and does not require additional assessment. Specifically, the site was low yielding, did not contain diagnostic artifacts or features, and the site and its artifacts are of relatively common types.

4.5 Site 4 (BaHh-4)

4.5.1 Record of Finds

Site 4 was found to comprise an isolated Indigenous findspot. The topography and site location with regards to the study area were previously documented in the Stage 2 and can be referenced in that section. The assessment covered the entire site extent.

A total of 5 test units were excavated and unit depths ranged from 30 cm (Unit 105E:225N) to 42 cm (Unit 100E:230N). The stratigraphy consisted of an average of 32 cm of medium brown to greyish-brown silt loam ploughzone (Lot 1) overlying sandy loam subsoil in shades of yellowish-orange to orangish-brown (Lot 2). No artifacts were recovered from test unit excavation. No cultural features or structural elements of potential CHVI were identified.

4.5.2 Analysis and Conclusions

The results of the Stage 3 site-specific assessment indicate that Site 4 represents an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The recovered biface thinning flake, crafted from Kettle Point chert in the previous assessment, stands as the sole artifact for this site. The artifact was likely plough dragged and ended up in its current location, potentially originating from Site 5 to the

northwest. Regardless, its strategic location suggests it was an ideal staging area for accessing lands along the Teeswater River. These findings align with current archaeological knowledge regarding short-term campsites, characterized by small assemblages. No local parallels have been identified beyond the four sites documented in this report, likely due to limited archaeological survey coverage in the region.

Following evaluation against the criteria outlined in Section 3.4 of the 2011 S&Gs and the SON 2011 *Standards*, Site 4 is of no further CHVI and does not require additional assessment. Specifically, the site was low yielding, did not contain diagnostic artifacts or features, and the site and its artifacts are of relatively common types.

4.6 Site 5 (BaHh-5)

Site 5 was found to comprise an isolated Indigenous findspot. The topography and site location with regards to the study area were previously documented in the Stage 2 and can be referenced in that section. The assessment covered the entire site extent.

A total of 5 test units were excavated and unit depths ranged from 33 cm (Unit 105E:215N) to 41 cm (Unit 100E:220N). The stratigraphy consisted of an average of 31 cm of medium brown to greyish-brown silt loam ploughzone (Lot 1) overlying sandy loam subsoil in shades of yellowish-orange to orangish-brown (Lot 2). No artifacts were recovered from test unit excavation. No cultural features or structural elements of potential CHVI were identified.

4.6.1 Analysis and Conclusions

The results of the Stage 3 site-specific assessment indicate that Site 5 represents an isolated Indigenous findspot. The site's integrity is moderately preserved, with visible signs of ploughing since the materials were deposited. The previously recovered piece of Kettle Point chert shatter, identified in the earlier assessment, serves as the sole artifact for this site. The artifact may have a connection to Site 4, located approximately 75 m to the southeast, given their similar chert composition, or they might not be related at all. Regardless, its strategic location suggests it was an ideal staging area for accessing lands along the Teeswater River. These findings align with current archaeological knowledge regarding short-term campsites, characterized by small assemblages. No local parallels have been identified beyond the four sites documented in this report, likely due to limited archaeological survey coverage in the region.

Following evaluation against the criteria outlined in Section 3.4 of the 2011 S&Gs and the SON 2011 *Standards*, Site 5 is of no further CHVI and does not require additional assessment. Specifically, the site was low yielding, did not contain diagnostic artifacts or features, and the site and its artifacts are of relatively common types.

4.7 Summary

The discovery of Indigenous sites in the vicinity of the Teeswater River underscores the historical significance of waterways as crucial transportation corridors for past populations. Particularly noteworthy is the identification of 14 artifacts (combined Stage 2 and Stage 3 findings), with six crafted from Saugeen chert. This aligns with expectations, given the presence of cherty limestone outcrops occur along the Teeswater River between Chepstow and Pinkerton. The modest yields from these sites are not unusual, reflecting the minimal impact of Indigenous groups on the landscape. Especially, given that a significant portion of their material culture comprised organic items susceptible to decomposition. Consequently, the archaeological record predominantly preserves the durable remnants of stone tools, providing valuable insights into past cultural practices despite the limited artifact visibility.

4.8 Documentary and Material Record

An inventory of the documentation and materials related to this project is provided in Table 7.

Table 7: Documentary Record (Stage 3)

Document/Material	Details	Location
Field Notes	3	Digital; 891 27 th St E, Owen Sound
Photographs	162	Digital; 891 27 th St E, Owen Sound
Field Maps	5	Digital; 891 27 th St E, Owen Sound

5.0 RECOMMENDATIONS

The Stage 1 assessment identified archaeological potential for both Indigenous and Euro-Canadian materials in the study area. Following the Stage 2 assessment, five areas of archaeological materials (Site 1–Site 5) were discovered. The subsequent Stage 3 site-specific assessments revealed that, due to low yields and the absence of diagnostics, none of these sites have further CHVI and do not warrant Stage 4 mitigation of development impacts. **Therefore, no additional archaeological assessments are recommended, and the study area can be considered free of archaeological concern.**

However, the unassessed portions of the property as indicated on the survey map, must be subjected to a Holding provision. This provision mandates the completion of an archaeological study, with recommendations implemented prior to any development proceeding.

The MCM is requested to review this report and provide a letter indicating their satisfaction that the fieldwork and reporting for this archaeological assessment are consistent with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

6.0 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 MCM, 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 *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 Government and Consumer Services.

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8.0 IMAGES



**Image 1: Site Conditions
(Facing Northeast)**



**Image 2: Site Conditions
(Facing East)**



**Image 3: Site Conditions
(Facing Southeast)**



**Image 4: Pedestrian Survey
(Facing South)**



**Image 5: Test Pit Survey of the Riverbank
(Facing East-northeast)**



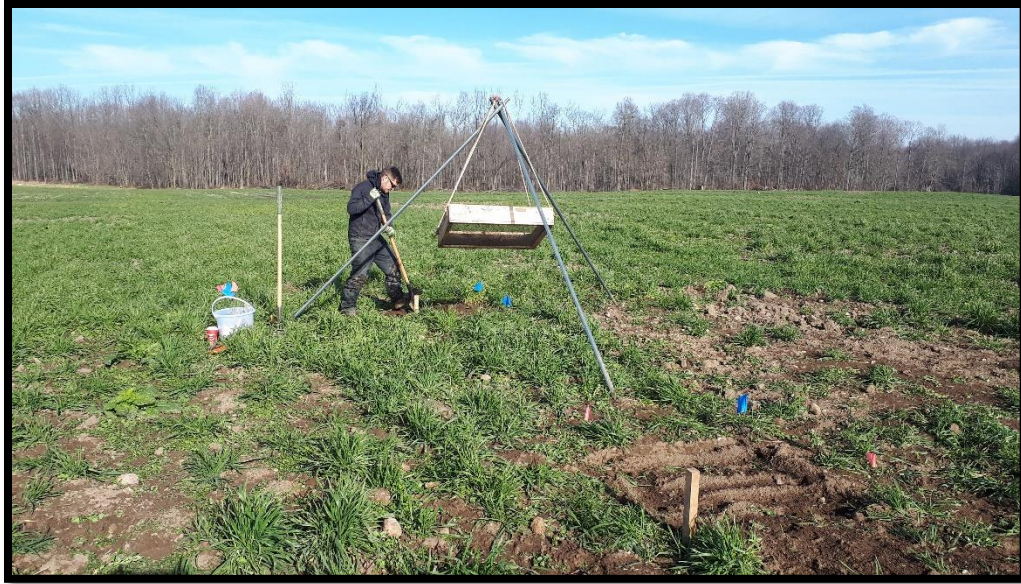
**Image 6: Test Pit Example
(Facing North)**



**Image 7: Teeswater Site Test Unit Excavation
(Facing Southwest)**



**Image 8: Teeswater Site Unit 100E:200N
(Facing North)**



**Image 9: BaHh-3 Test Unit Excavation
(Facing North-northeast)**



**Image 10: BaHh-3 Unit 110E:205N
(Facing East)**



**Image 11: BaHh-4 Test Unit Excavation
(Facing East)**



**Image 12: BaHh-4 Unit 100E:235N
(Facing South)**



**Image 13: BaHh-5 Test Unit Excavation
(Facing East)**



**Image 14: BaHh-5 Unit 95E:225N
(Facing North)**



**Image 15: BaHh-6 Test Unit Excavation
(Facing Southwest)**



**Image 16: BaHh-6 Unit 105E:220N
(Facing South)**



Image 17: Stage 2 Artifacts



Image 18: Stage 3 Artifacts

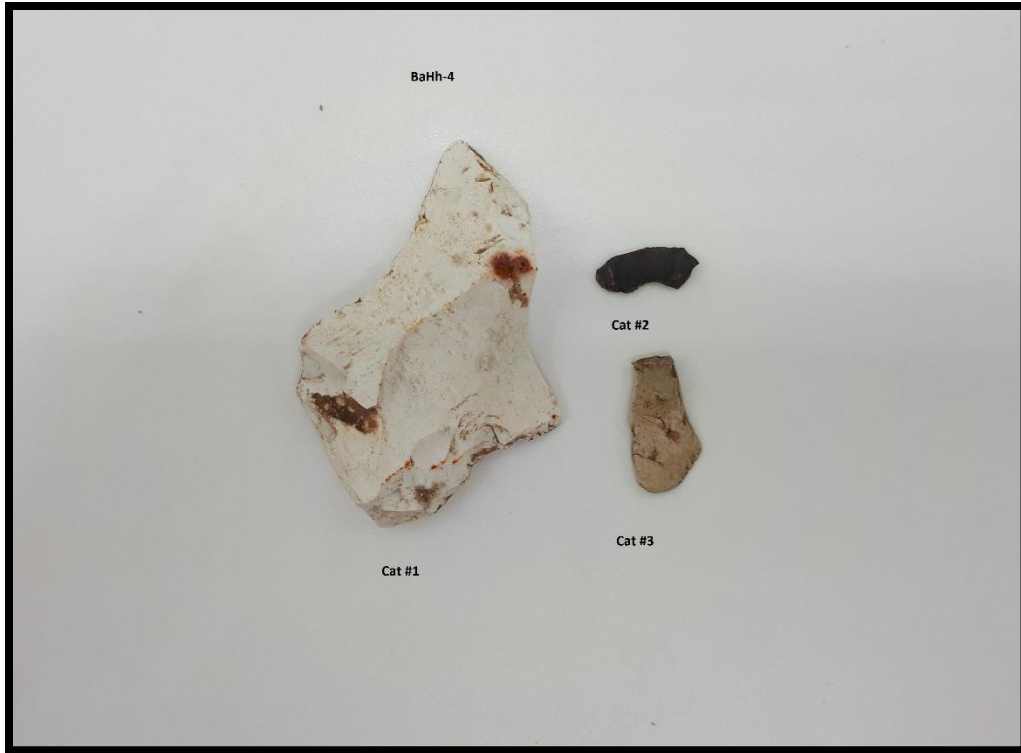


Image 19: Stage 3 Artifacts

9.0 FIGURES

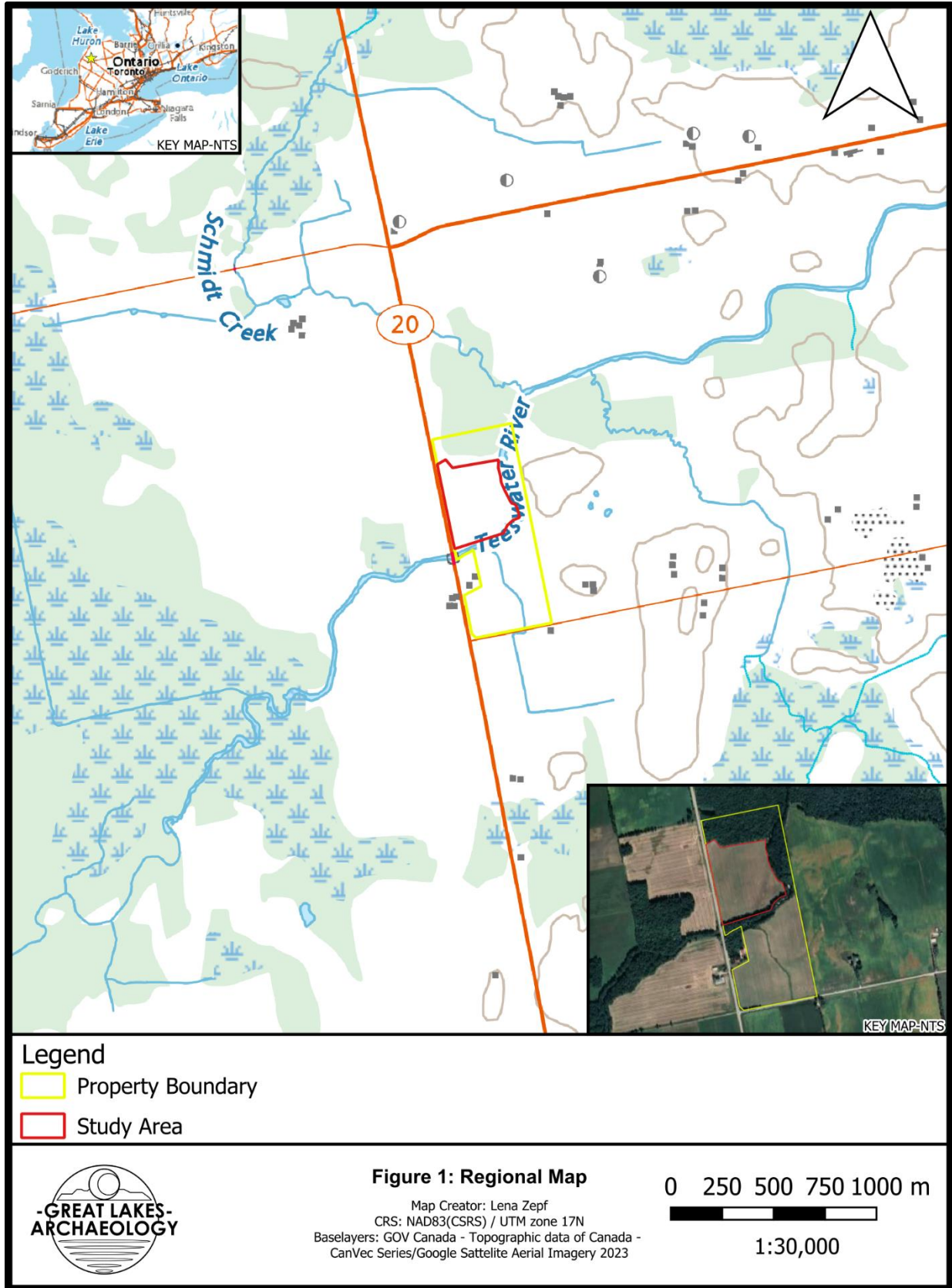


Figure 1: Location of the Study Area

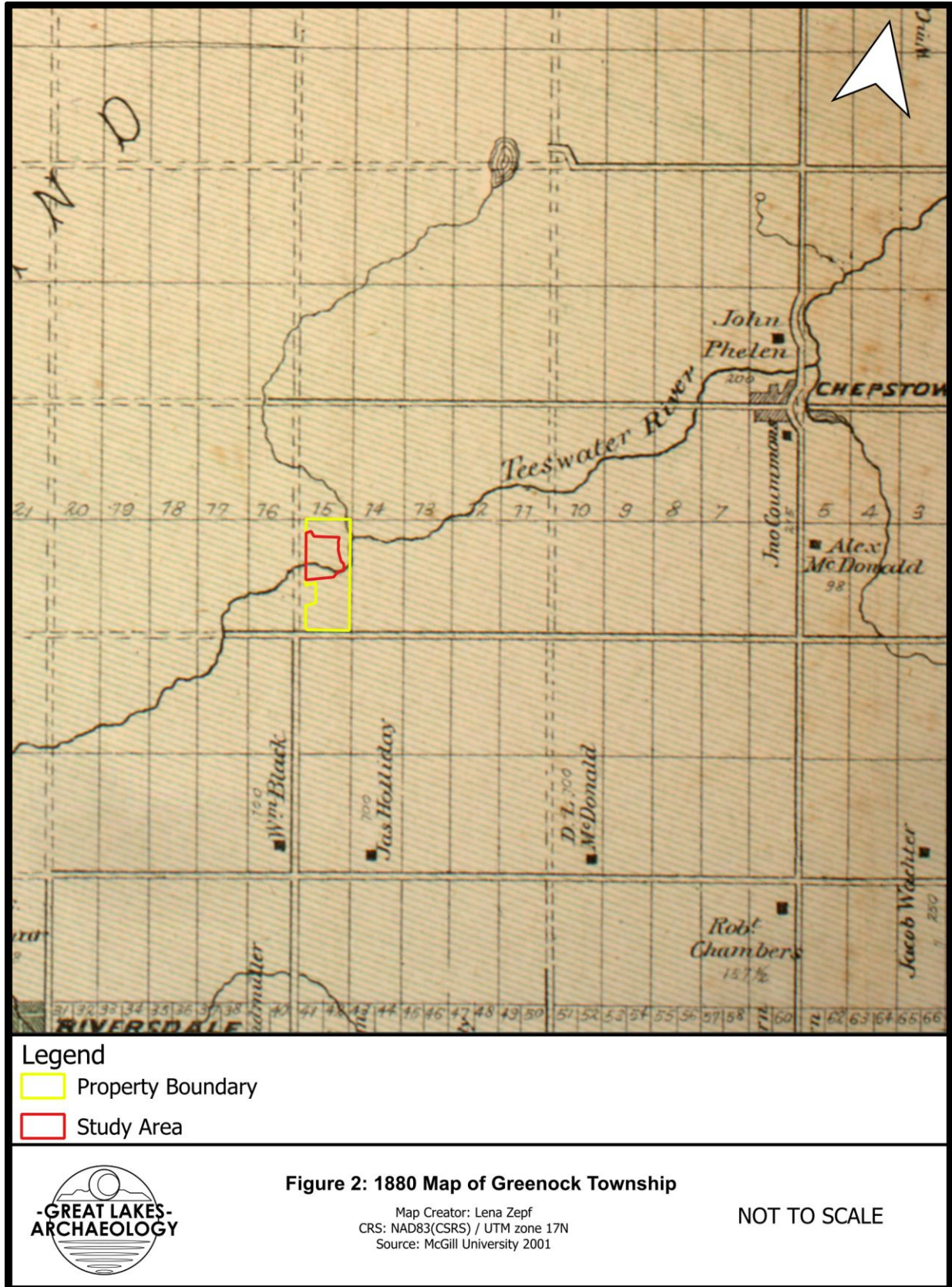


Figure 2: The Map of Greenock Township (1880)

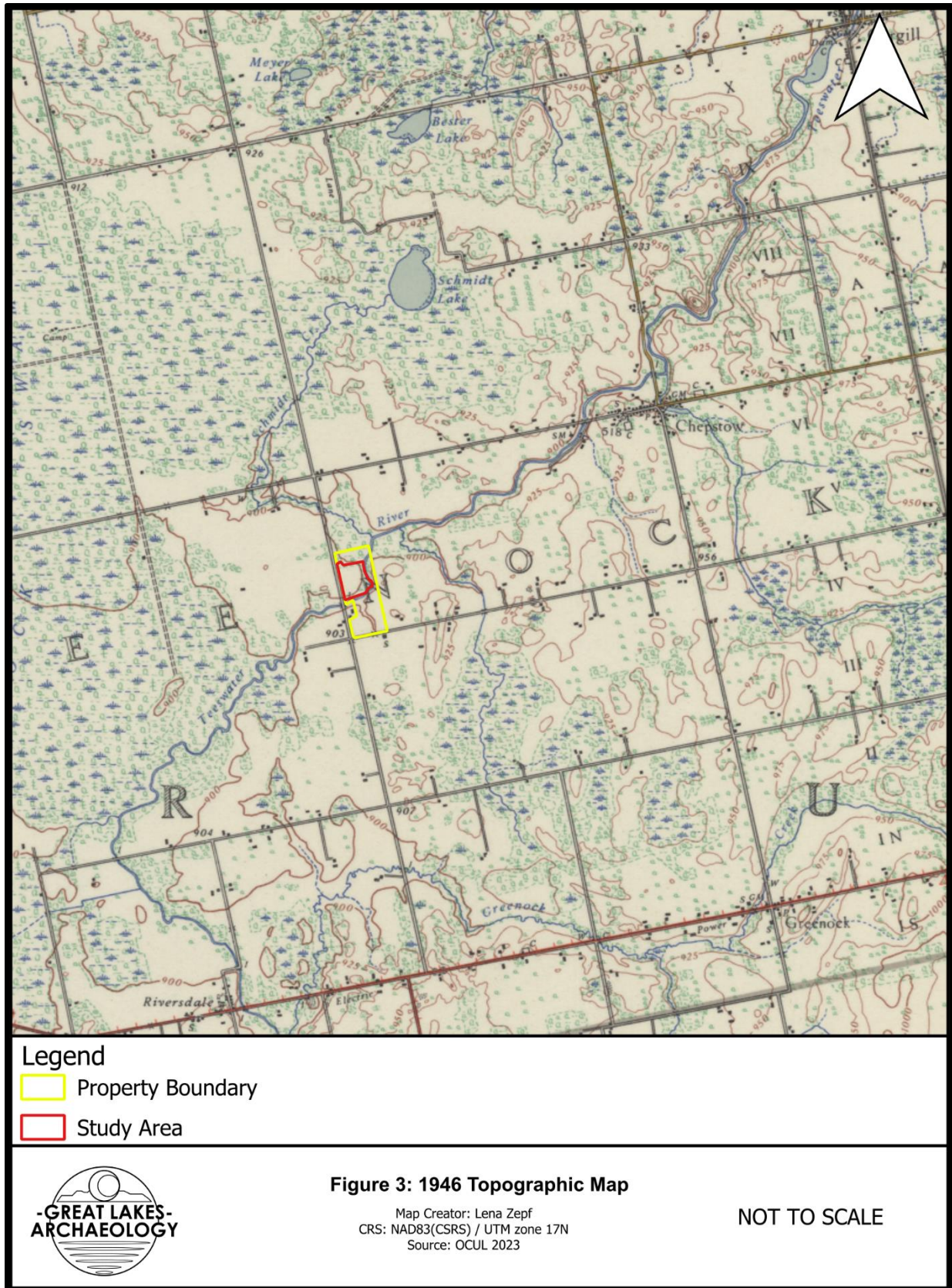


Figure 3: Topographic map (1946)



Figure 4: Aerial Image (1954)

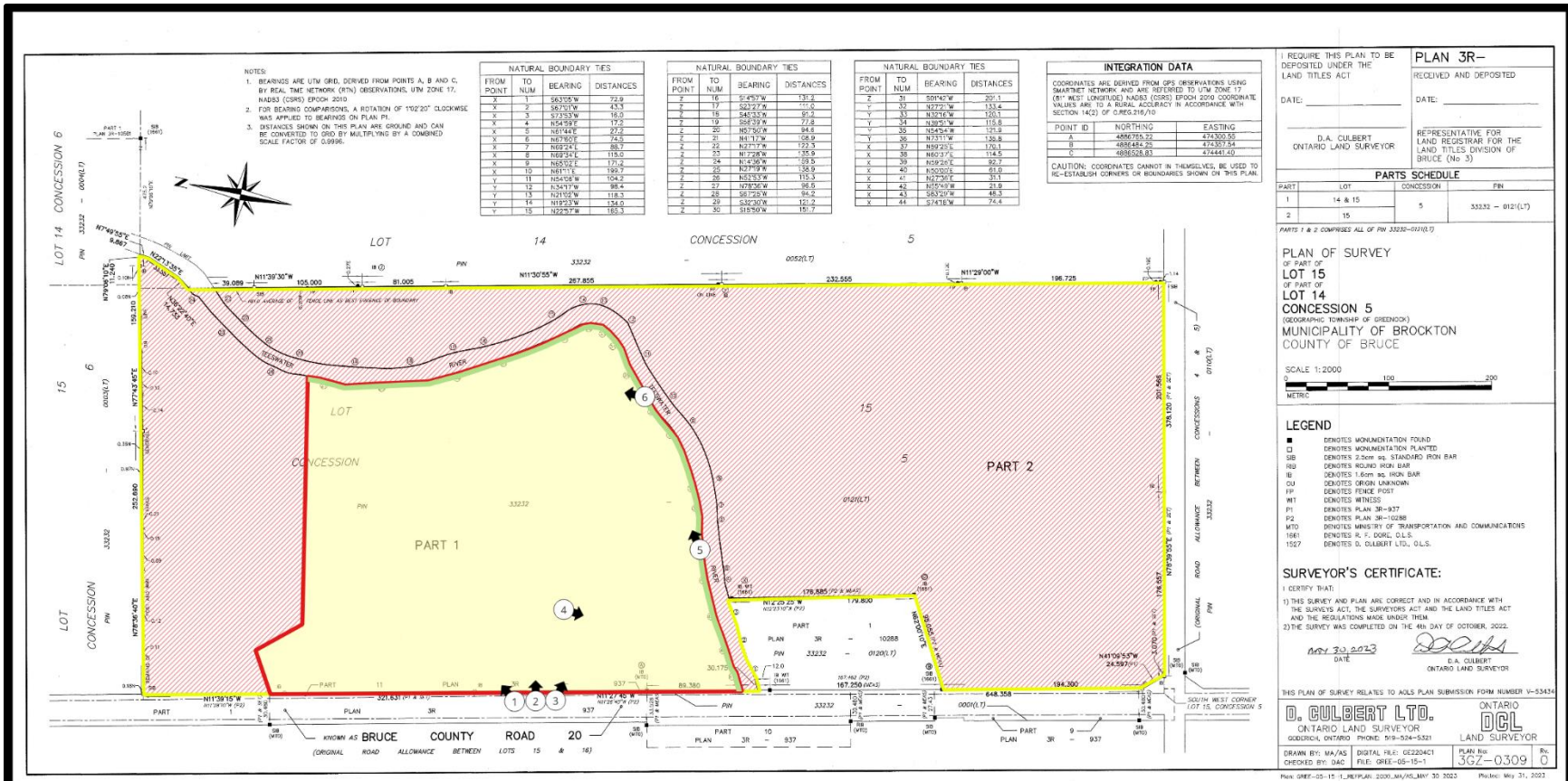


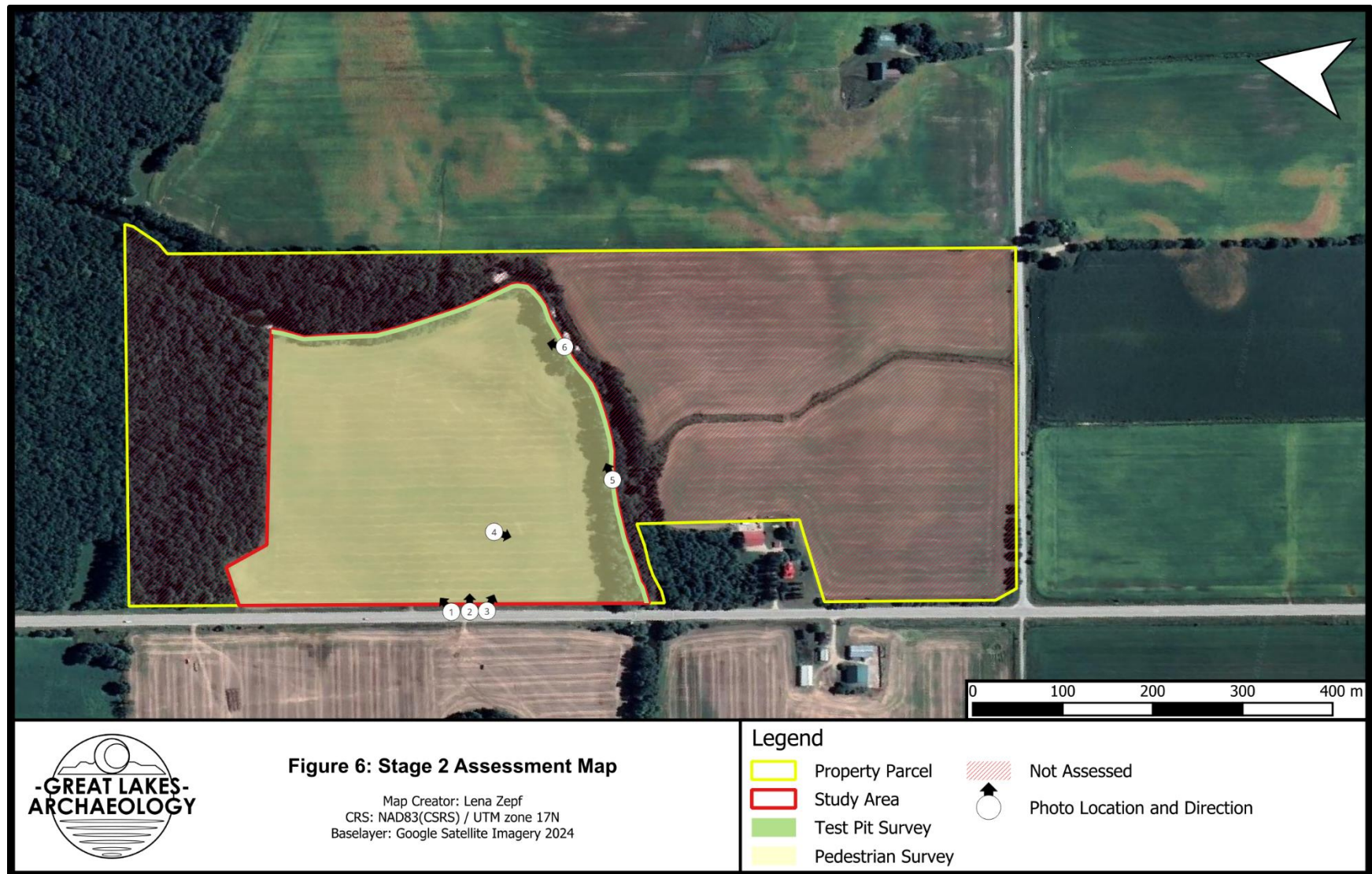
Figure 5: Stage 2 Assessment Map

Map Creator: Lena Zepf
CRS: NAD83(CSRS) / UTM zone 17N
Baselayer: Site Plan produced by D. Culbert Ltd

Legend

- Property Parcel
- Study Area
- Test Pit Survey
- Pedestrian Survey
- Not Assessed
- Photo Location and Direction

Figure 5: Assessment Results (Survey Plan)



APPENDICES

Appendix A: Terminology

Bifaces exhibit a variety of sizes and shapes, making them the most common tool type. All bifaces have two sides that meet to form a single edge that encompasses the entire artifact. Both sides are called faces, and both show evidence of previous flake removals. Some bifaces were modified for hafting or attachment to a handle or shaft, such as points for arrows or spears. All hafted bifaces may have also been used as cutting or slicing tools. The shaping and crafting of bifaces required considerable skill, and the choice of materials for their construction often depended on the local availability of suitable stones.

Biface thinning flakes are a type of debitage. Specifically, a biface thinning flake refers to a specific type of flake removed during the process of thinning or refining a bifacial (worked on both sides) stone tool. In the context of lithic technology, a biface thinning flake is produced by intentionally removing a flake from the surface of a biface to achieve a thinner and more refined final product. Biface thinning flakes are deliberately struck off to reduce the thickness of the tool, creating a more efficient and finely tuned cutting edge. The removal of these thinning flakes requires skill and precision, and the resulting reduction in thickness enhances the functionality and effectiveness of the finished stone tool.

Chert is a type of microcrystalline or cryptocrystalline quartz, a form of silica. It is a sedimentary rock composed mainly of the mineral quartz and can come in various colors, including white, gray, brown, green, and black. Chert is known for its hardness and conchoidal fracture, meaning it breaks with smooth, curved surfaces. In archaeological contexts, chert is of particular interest because it was commonly used for making stone tools due to its ability to hold a sharp edge when properly knapped. Different varieties of chert may have distinct colors and patterns, and the availability of this raw material often influenced the technology and tool traditions of prehistoric societies.

Conchoidal flakes have a dorsal surface and a ventral surface. The ventral surface is the surface that broke away from the objective piece, is usually smooth, and shows no evidence of previous flake removals. The dorsal surface is opposite the ventral surface and may display remnants of the original exterior of the rock (cortex) or of previous flake removals or flake scars.

Cortex can arise through chemical or mechanical weathering of the stone surface. Chemical weathering occurs due to exposure to moisture and/or heat, resulting in alterations in color and texture. In some cases, the cortical surface may not exhibit a change in color, making it more challenging to identify. On the other hand, mechanical weathering typically affects the texture of the stone surface, such as when a nodule is rolled in a river or abraded by sand. The amount of cortex on the dorsal surface of flake debitage has been used as an indicator of the reduction stage for tools.

Debitage encompasses the detached fragments or flakes that are discarded without being fashioned into tools. It serves as the residual material resulting from the production or reduction of stone tools, often emanating from the intentional removal of pieces from a larger stone core.

These flakes can manifest in a diverse range of morphologies, a consequence of the shaping process that may cause the objective piece to shatter, yielding debitage in numerous shapes and sizes. During controlled production of various stone tools, skilled tool makers can deliberately detach flakes of distinct shapes. Each flake removed in a controlled manner carries morphological characteristics that offer insights into how and from what kind of objective piece it was detached. Notably, many flakes removed in a controlled manner exhibit conchoidal fracture characteristics.

Feather termination, or smooth termination, refers to a gradual shearing of a flake from the objective piece.

Shatter, also known as nonflake debitage, comprises irregularly shaped fragments resulting from the fracturing or breaking of lithic material. It can encompass a range of sizes, from large blocky chunks to smaller pieces, and lacks the distinct shapes often associated with intentional flake removal.

Striking platform refers to the specific area or point on the objective piece where force was applied to detach a flake. Various types of striking platforms exist, each influenced by the characteristics of the original objective piece. These platforms may be flat, feature multiple facets, or exhibit a rounded form resulting from grinding.

Appendix B: Artifact Catalogue (Stage 2)

Cat #	Site	Provenience	Lot	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered
1	Teeswater	Location 1	1	20/09/2023	1	Indigenous	Unknown Chert	Formal Tool	Biface				Chert is similar to Kettle Point chert (waxy), but lacks banding and has a distinct dark colouration	N
2	BaHh-3	Location 2	1	21/09/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Biface Thinning Flake				Evidence of plough damage; Flat striking platform	N
3	BaHh-4	Location 3	1	21/09/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Biface Thinning Flake				Smooth ventral surface; Ripple marks	N
4	BaHh-4	Location 4	1	21/09/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Shatter				Cortex on dorsal surface	N
5	BaHh-5	Location 5	1	21/09/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Biface Thinning Flake				Evidence of plough damage	N
6	BaHh-6	Location 6	1	22/09/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Shatter				Cortex present	N

Appendix C: Artifact Catalogue (Teeswater Site)

Cat #	Site	Provenience	Lot	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered
1	Teeswater	97E:102N	1	27/10/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake Fragment					No
2	Teeswater	100E:200N	1	27/10/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake Fragment				Banded chert	No
3	Teeswater	105E:205N	1	26/10/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake Fragment					No

Appendix D: Artifact Catalogue (BaHh-3)

Cat #	Site	Provenience	Lot	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered
1	BaHh-3	105E:210N	1	17/11/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Flake Fragment					No

Appendix E: Artifact Catalogue (BaHh-4)

Cat #	Site	Provenience	Lot	Date	Count	Class	Material	Object Group	Object Name	Dateable Attribute	Date Range	Reference	Comments	Heat Altered
1	BaHh-4	105E:220N	1	10/11/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Secondary Flake					No
2	BaHh-4	105E:235N	1	13/11/2023	1	Indigenous	Saugeen Chert	Lithic Debitage	Flake Fragment					No
3	BaHh-4	95E:235N	1	14/11/2023	1	Indigenous	Kettle Point Chert	Lithic Debitage	Flake Fragment					No