ORIGINAL 25 APRIL 2025

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT

Property Located at Redford Pit, 133832 Allan Park Road, Part of Lot 20, Concession 3, (Geographical Township of Bentinck), Town of Hanover, Grey County, Regional Municipality of West Grey
(AMICK Corporate Project #2022-958/MCM File #P038-1459-2024)

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REGISTERED SITE: Allan Park Road Site (BbHf-10)

25 APRIL 2025

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Dr. Robert Martin (Saugeen Ojibway Nation Archaeology Coordinator)

EXECUTIVE SUMMARY

This report describes the results of the 2024 Stage 1-2 Archaeological Property Assessment of Property Located at Redford Pit, 133832 Allan Park Road, Part of North ½ of Lot 20, Concession 5, (Geographical Township of Bentinck), Municipality of West Grey, Grey County, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Aggregate Resources Act (RSO 1990) and was conducted under Professional Archaeologist License #P038 issued to Marilyn Cornies by the Minister of Citizenship and Multiculturalism (MCM) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

The entirety of the study area is approximately 20.8 hectares (ha) in area and includes within it ploughable lands, areas of steep slope, lawn, wooded areas, meadow, two ponds, and a farm complex consisting of a house and a garage. The study area is bounded on the north by farmland, on the east by Allan Park Road, on the south by farmland and on the west by farmland. AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Property Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. Following the criteria outlined by MCMS (2011) for determining archaeological potential, portions of the study area were determined as having archaeological potential for Pre-contact and Post-contact archaeological resources. Consequently, this report is being prepared in advance of the planning process for this property.

The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment which consisted of high intensity test pit methodology at a five-metre interval between individual test pits, and high intensity pedestrian survey at an interval of five-metres between individual transects on 11, 12, 13, 14 November 2024. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Exeter corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the MCM on behalf of the government and citizens of Ontario.

AMICK Consultants Limited initiated communication with Saugeen Ojibway Nation (SON) in July 2023 to arrange representation on the Stage 1-2 Archaeological Assessment of 133832 Allan Park Road and address any concerns. Saugeen Ojibway Nation (SON) is the First Nations community in closest proximity to the study area who have traditionally held an interest in local development and have a history of working with local approval agencies. Arrangements were made to include representation from the Saugeen Ojibway Nation (SON) who provided monitors for the assessment addressed in this report. Dr. Robert Martin (SON) acted as the representative monitor during the assessment on 11, 12, 13, 14 November 2024.

As a result of the property Assessment of the study area, one isolated artifact was documented. In accordance with the Saugeen Ojibway Nation's Standards and Guidelines Section 6.2 *Site Significance,* the isolated Pre-contact lithic find has been assigned a Borden Number and registered in the MCM's Ontario Archaeological Site Database. Additionally, all registered archaeological sites regardless of size and artifact density must be subject to a Stage 3 Site Specific Assessment. Isolated Find 1 has been registered as the Allan Park Road Site (BbHf-10). Based on the characteristics of this site and the analysis of artifact, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the Allan Park Road Site (BbHf-10) has not been completely documented. There is potential for further CHVI for this location. The Allan Park Road Site (BbHf-10) requires Stage 3 Site-specific Assessment to gather further data to determine if Stage 4 Mitigation of Development Impacts will be required.*
2. *A Stage 3 Site-specific assessment of the Allan Park Road Site (BbHf-10) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the SON Archaeology Standards and Guidelines (Saugeen Ojibway Nation 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Infill units will amount to 20% of the grid unit total, focusing on areas of interest within the site extent. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6-millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011).*
3. *The Stage 3 Site-specific Assessment of the Allan Park Road Site (BbHf-10) Site must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
4. *A CSP has been completed as part of the Stage 2 Property Assessment and is not required as part of the Stage 3 Site-specific Assessment of the Allan Park Road (BbHf-10) Site as this component of the Stage 3 requirements is already satisfied.*

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

This report describes the results of the 2024 Stage 1-2 Archaeological Property Assessment of Property Located at Redford Pit, 133832 Allan Park Road, Part of North ½ of Lot 20, Concession 5, (Geographical Township of Bentinck), Municipality of West Grey, Grey County, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Aggregate Resources Act (RSO 1990) and was conducted under Professional Archaeologist License #P038 issued to Marilyn Cornies by the Minister of Citizenship and Multiculturalism (MCM) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

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The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment which consisted of high intensity test pit methodology at a five-metre interval between individual test pits, and high intensity pedestrian survey at an interval of 5 metres between individual transects on 11, 12, 13, 14 November 2024. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Exeter corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the MCM on behalf of the government and citizens of Ontario.

The proposed development of the study area includes the expansion of the Redford Pit aggregate pit with associated services and landscape modifications. An Existing Features and Operational Plan have been submitted together with this report to MCM for review and reproduced within this report as Maps 3 & 4.

1.2 HISTORICAL CONTEXT

1.2.1 PRE-CONTACT LAND-USE OUTLINE

Table 1 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and as a very broad outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 1 PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point, Saugeen, Point Peninsula, and Meadowood Cultures
3000 4000 5000 6000	Archaic	Laurentian Culture
7000 8000 9000 10000 11000	Paleo	Plano and Clovis Cultures
		(Wright 1972)

What follows is an outline of Aboriginal occupation in the area during the Pre-Contact Era from the earliest known period, about 9000 B.C. up to approximately 1650 AD.

1.2.1.1 PALEO PERIOD (APPROXIMATELY 9000-7500 B.C.)

North of Lake Ontario, evidence suggests that early occupation began around 9000 B.C. People probably began to move into this area as the glaciers retreated and glacial lake levels began to recede. The early occupation of the area probably occurred in conjunction with environmental conditions that would be comparable to modern Sub-Arctic conditions. Due to the great antiquity of these sites, and the relatively small populations likely involved, evidence of these early inhabitants is sparse and generally limited to tools produced from stone or to by-products of the manufacture of these implements.

1.2.1.2 ARCHAIC PERIOD (APPROXIMATELY 8000-1000 B.C.)

By about 8000 B.C. the gradual transition from a post glacial tundra-like environment to an essentially modern environment was largely complete. Prior to European clearance of the

landscape for timber and cultivation, the area was characterized by forest. The Archaic Period is the longest and the most apparently stable of the cultural periods identified through archaeology. The Archaic Period is divided into the Early, Middle and Late Sub-Periods, each represented by specific styles in projectile point manufacture. Many more sites of this period are found throughout Ontario than of the Paleo Period. This is probably a reflection of two factors: the longer period of time reflected in these sites, and a greater population density. The greater population was likely the result of a more diversified subsistence strategy carried out in an environment offering a greater variety of abundant resources (Smith 2002:58-59).

Current interpretations suggest that the Archaic Period populations followed a seasonal cycle of resource exploitation. Although similar in concept to the practices speculated for the big game hunters of the Paleo Period, the Archaic populations utilized a much broader range of resources, particularly with respect to plants. It is suggested that in the spring and early summer, bands would gather at the mouths of rivers and at rapids to take advantage of fish spawning runs. Later in the summer and into the fall season, smaller groups would move to areas of wetlands to harvest nuts and wild rice. During the winter, they would break into yet smaller groups probably based on the nuclear family and perhaps some additional relatives to move into the interior for hunting. The result of such practices would be to create a distribution of sites across much of the landscape (Smith 2002: 59-60).

The material culture of this period is much more extensive than that of the Paleo First Nations. Stylistic changes between Sub-Periods and cultural groups are apparent, although the overall quality in production of chipped lithic tools seems to decline. This period sees the introduction of ground stone technology in the form of celts (axes and adzes), manos and metates for grinding nuts and fibres, and decorative items like gorgets, pendants, birdstones, and bannerstones. Bone tools are also evident from this time period. Their presence may be a result of better preservation from these more recent sites rather than a lack of such items in earlier occupations. In addition, copper and exotic chert types appear during the period and are indicative of extensive trading (Smith 2002: 58-59).

1.2.1.3 WOODLAND PERIOD (APPROXIMATELY 1000 B.C.-1650 A.D.)

The primary difference in archaeological assemblages that differentiates the beginning of the Woodland Period from the Archaic Period is the introduction of ceramics to Ontario populations. This division is probably not a reflection of any substantive cultural changes, as the earliest sites of this period seem to be in all other respects a continuation of the Archaic mode of life with ceramics added as a novel technology. The seasonally based system of resource exploitation and associated population mobility persists for at least 1500 years into the Woodland Period (Smith 2002: 61-62).

The Early Woodland Sub-Period dates from about 1000-400 B.C. Many of the artifacts from this time are similar to the late Archaic and suggest a direct cultural continuity between these two temporal divisions. The introduction of pottery represents and entirely new technology that was probably acquired through contact with more southerly populations from which it likely originates (Smith 2002:62).

The Middle Woodland Sub-Period dates from about 400 B.C.-800 A.D. Within the region including the study area, a complex emerged at this time termed "Point Peninsula." Point Peninsula pottery reflects a greater sophistication in pottery manufacture compared with the earlier industry. The paste and temper of the new pottery is finer and new decorative techniques such as dentate and pseudo-scallop stamping appear. There is a noted Hopewellian influence in southern Ontario populations at this time. Hopewell influences from south of the Great Lakes include a widespread trade in exotic materials and the presence of distinct Hopewell style artifacts such as platform pipes, copper or silver panpipe covers and shark's teeth. The populations of the Middle Woodland participated in a trade network that extended well beyond the Great Lakes Region.

The Late Woodland Sub-Period dates from about 500-1650 A.D. The Late Woodland includes four separate phases: Princess Point, Early Ontario Iroquoian, Middle Ontario Iroquoian and Late Ontario Iroquoian.

The Princess Point phase dates to approximately 500-1000 A.D. Pottery of this phase is distinguished from earlier technology in that it is produced by the paddle method instead of coil and the decoration is characterized by the cord wrapped stick technique. Ceramic smoking pipes appear at this time in noticeable quantities. Princess Point sites cluster along major stream valleys and wetland areas. Maize cultivation is introduced by these people to Ontario. These people were not fully committed to horticulture and seemed to be experimenting with maize production. They generally adhere to the seasonal pattern of occupation practiced by earlier occupations, perhaps staying at certain locales repeatedly and for a larger portion of each year (Smith 2002: 65-66).

The Early Ontario Iroquoian stage dates to approximately 950-1050 A.D. This stage marks the beginning of a cultural development that led to the historically documented Ontario Iroquoian groups that were first contacted by Europeans during the early 1600s (Petun, Neutral, and Huron). At this stage formal semi-sedentary villages emerge. The Early stage of this cultural development is divided into two cultural groups in southern Ontario. The areas occupied by each being roughly divided by the Niagara Escarpment. To the west were located the Glen Meyer populations, and to the east were situated the Pickering people (Smith 2002: 67).

The Middle Ontario Iroquoian stage dates to approximately 1300-1400 A.D. This stage is divided into two sub-stages. The first is the Uren sub-stage lasting from approximately 1300-1350 A.D. The second of the two sub-stages is known as the Middleport sub-stage lasting from roughly 1350-1400 A.D. Villages tend to be larger throughout this stage than formerly (Smith 2002: 67).

The Late Ontario Iroquoian stage dates to approximately 1400-1650 A.D. During this time the cultural divisions identified by early European explorers are under development and the geographic distribution of these groups within southern Ontario begins to be defined.

1.2.2 Post-Contact Land Use Outline

The Huron, Petun and various Algonkian First Nations resided in this area for an extended period of time prior to any European visitors to the area. The County of Grey was first established in 1852. Before the county was organized, the British referred to the entire area as "The Queen's Bush". Until 1852 this area was known for its dangerous travelling conditions for Euro-Canadians. The first townships within Grey County were originally called "Alta" and "Zero" which were quickly renamed Collingwood and St. Vincent respectively. During the colonization of the County, a quickly established network of trails and roads, in an addition to several natural harbours, provided easy access for settlers. However, due to the great distances involved and dangerous traveling conditions, the early settlers of this area relied heavily on First Nations to advise on settlement area selection, crop planting, medicine and survival. From the start of colonization it was easy to use the numerous natural resources easily available in the area as a means to generate income. Typically fish, furs, minerals, and forestation were the initial main industries. By 1865 Grey County consisted of 16 Townships, 4 towns and 44 villages or post offices (Grey County 2010).

Map 2 is a facsimile segment from Illustrated Atlas of the Dominion of Canada (Belden 1881). Map 2 illustrates the location of the study area and environs as of 1881. The study area is shown to belong to Jno Bailey; no structures are shown to be within the study area. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. In addition, this map illustrates the Saugeen River situated immediately east of the study area and a settlement road is depicted as adjacent to the study area to the east. This road is the current Allan Park Rd., and the river is the Saugeen River.

A plan of the study area is included within this report as Maps 3 & 4. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 5, 6 & 7.

1.2.3 Summary of Historical Context

The brief overview of readily available documentary evidence indicates that the study area is situated within an area that was close to historic transportation routes therefore has potential for sites relating to early Post-contact settlement in the region. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past. The Saugeen River is located approximately 45 metres east of the study area.

1.3 Archaeological Context

The study area is located near the Saugeen River and is bounded on the north by farmland, on the east by Allan Park Road, on the south by farmland and on the west by farmland.

A farm complex consisting of a house, a garage and a gravel driveway are present within the study area. The study area contains within it ploughable lands, wooded areas, lawn, meadow, areas of steep slope, and two ponds. The study area appears to retain much of its natural topography.

1.3.1 PHYSIOGRAPHIC REGION

The study area is situated within the Horseshoe Moraines physiographic region. The surface is composed of two chief landform components (a) the irregular stony knobs and ridges which are composed mostly of till with some sand and gravel deposits (kames) and (b) the more or less pitted sand and gravel terraces and swampy valley floors. Huron clay is the most representative soil type. The average depth is 18-20 inches and it is generally susceptible to erosion. The general elevation is from 800 to 1700 feet a.s.l. (Chapman and Putnam 1984: 127-129).

1.3.2 SURFACE WATER

There are two ponds located within the study area, one is situated centrally within the study area and the other is located in the southeast corner of the study area. The study area is located approximately 45 metres west of the Saugeen River.

1.3.3 LITHIC SOURCES

The study area is located near two chert formations: Fossil Hill Formation which has outcrops of Beaver Valley (Collingwood) chert and Bois Blanc Formation which has outcrops of Saugeen chert.

Fossil Hill chert is a member of the Middle Silurian Fossil Hill Formation. This formation stretches south from the Beaver Valley in the Collingwood area to the Caledon area in Southern Ontario (Eley and von Bitter 1989:22). It is mainly found in poorly exposed outcrops, although sources in the Collingwood area provide excellent chert resources (Eley and von Bitter 1989:31). It consists of white to light-grey with red or tan to yellow inclusions with dull lustre and a rough texture (Armstrong 2018:70). Fossil Hill chert, particularly the Collingwood variant, was heavily used in Paleoindian sites from approximately 11000-8000 BCE (Ellis 2011; Ellis and Deller, 1990).

Bois Blanc chert is a member of the Early Devonian Bois Blanc Formation and occurs in thin beds or nodules located in several areas in the vicinity of Hagersville, Innerkip and Fort Erie Ontario (Eley and von Bitter 1989:29). This material is characterized by a diversity of texture, colour, and composition (Eley and von Bitter 1989:19), ranging from light to dark grey, grey blue, or brown and sometimes exhibit mottling (Eley and von Bitter 1989:19). Types of chert within the Bois Blanc formation include Haldimand, Colbourne, and Saugeen (Armstrong 2018: 64). Bois Blanc and Onondaga cherts share similarities in their colours and since this study relied on macroscopic analysis of lithic materials, there may be an error in representative chert frequencies.

The closest known outcrops of Beaver Valley (Collingwood) chert are located approximately 41 kilometers northeast of the study area and the closest known outcrops of Saugeen chert are located approximately 42 kilometers northwest of the study area. As well, there is a Cherty boic blanc limestone chert bed located approximately 20 kilometers to the west of the study area.

1.3.4 REGISTERED ARCHAEOLOGICAL SITES

The Archaeological Sites Database administered by the MCMS indicates that there are one (1) previously documented site within 1 kilometre of the study area. However, it must be noted that this assumes the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MCMS. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

1.3.4.1 PRE-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MCMS. As a result, it was determined that no (0) archaeological sites relating directly to Pre-contact habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that Pre-contact people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. Even in cases where one or more assessments may have been conducted in close proximity to a proposed landscape alteration, an extensive area of physical archaeological assessment coverage is required throughout the region to produce a representative sample of all potentially available archaeological data in order to provide any meaningful evidence to construct a pattern of land use and settlement in the past.

1.3.4.2 POST-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MCMS. As a result, it was determined that one (1) archaeological site relating directly to Post-contact habitation/activity had been formally registered within the immediate vicinity of the study area. All previously registered Post-contact sites are briefly described below in Table 2:

TABLE 2 POST-CONTACT SITES WITHIN 1KM

Borden #	Site Name	Time Period	Affinity	Site Type
BbHf-5		Post-Contact	Euro-Canadian	Other secondary dump or homestead

This site demonstrates archaeological potential for further archaeological resources related to the Post-Contact period with respect to the archaeological assessment of the proposed undertaking.

1.3.4.3 Registered Sites of Unknown Cultural Affiliation

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MCMS. As a result, it was determined that zero (0) archaeological sites of unknown cultural affiliation have been formally registered within the immediate vicinity of the study area.

1.3.5 Previous Archaeological Assessments

On the basis of information supplied by MCMS, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MCMS. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

1.3.6 Historic Plaques

There are no relevant plaques associated with the study area, which would suggest an activity or occupation within, or near, the study area that may indicate potential for associated archaeological resources of significant CHVI.

1.3.7 Summary of Archaeological Context

The study area contains a farm complex consisting of a house, a garage and a gravel driveway. The study area contains within it ploughable lands, wooded areas, lawn, meadow, areas of steep slope, and two ponds. The study area appears to retain much of its natural topography. The study area is located approximately 45 metres west of the Saugeen River.

Current conditions within the study area indicate that some areas of the property may have no or low archaeological potential and do not require Stage 2 Property Assessment or should be excluded from Stage 2 Property Assessment. These areas would include the footprint of existing structures, and areas under gravel. A significant proportion of the study area does exhibit archaeological potential and therefore a Stage 2 Property Assessment is required.

Background research also indicates that the study area is situated in the Horseshoe Moraines physiographic region, which is characterized by Huron clay. In addition, the study area is located near two chert formations; Fossil Hill Formation which has outcrops of Beaver Valley (Collingwood) chert and Bois Blanc Formation which has outcrops of Saugeen chert.

A total of one (1) previously registered archaeological site has been documented within 1km of the study area. Of these, one (1) is Post-contact. This site demonstrates archaeological potential for further archaeological resources of Post-contact activity and occupation with respect to the archaeological assessment of the current study area.

The study area is situated in area for which there is no archaeological master plan. There are no relevant plaques associated with the study area.

The study area has potential for archaeological resources of Native origins based on a proximity to a source of potable water that was also used as a means of waterborne trade and communication. Background research also suggests potential for archaeological resources of Post-contact origins based on proximity to previously registered archaeological sites of Post-contact origins, and proximity to a historic roadway.

2.0 FIELD WORK METHODS AND WEATHER CONDITIONS

2.1 INTRODUCTION

A property inspection was carried out in compliance with Standards and Guidelines for Consultant Archaeologists (MTC 2011) to document the existing conditions of the study area to facilitate the Stage 2 Property Assessment. All areas of the study area were visually inspected and select features were photographed as a representative sample of each area defined within Maps 5, 6 & 7. Observations made of conditions within the study area at the time of the inspection were used to inform the requirement for Stage 2 Property Assessment for portions of the study area as well as to aid in the determination of appropriate Stage 2 Property Assessment strategies. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 5, 6 & 7 of this report.

The Stage 2 Assessment of the study area was carried out on 11, 12, 13, 14 November 2024 and consisted of high intensity test pit methodology at a five-metre interval between individual test pits, and by high intensity pedestrian survey at an interval of five-metres between individual transects which was conducted in compliance with the Standards and Guidelines for Consultant Archaeologists, section 2.1.1: Pedestrian Survey/2.1.2: Test Pit Survey (MTC 2011). Weather conditions were appropriate for the necessary fieldwork required to complete the Stage 2 Property Assessment and to create the documentation appropriate to this study.

2.2 PEDESTRIAN SURVEY

Approximately 14.38 ha of the study area was subjected to pedestrian survey at 5m transect intervals. All actively or recently cultivated agricultural land within the study area was recently ploughed deep enough to provide total topsoil exposure but not deeper than previous ploughing and was weathered by a heavy rainfall. In addition, approximately 90% of the

ploughed field surface was exposed and visible per Section 2.1.1, Standards 1-6 (MTC 2011). All work was photo-documented.

While conducting the pedestrian survey, archaeological resources were identified and survey transects were reduced to 1m intervals over a minimum of a 20m radius around individual finds. All artifacts found on the surface were marked with numbered flags. The artifacts were collected and bagged according to the numbered location where each was found. Every find location was individually recorded using GPS with an accuracy of 5 metres or less. All formal artifact types were collected. As a result of the completion of the CSPs on all archaeological locations, this component of Stage 3 Site-specific Assessment has been completed and is not required for subsequent investigations of these sites.

2.3 TEST PIT SURVEY

Approximately 4.40 ha of the study area was wooded, unploughable meadow with heavy brush and weed growth, lawn that cannot be strip ploughed, occupied by existing landscaping or infrastructure that would be damaged where ploughing or cultivation would not be viable and was subjected to test pit survey at 5m intervals per Section 2.1.2, Standard 1 (MTC 2011).

All test pits were excavated within 1m of all built structures, were at least 30cm in diameter and were excavated into the first 5cm of subsoil to examine stratigraphy, cultural features and evidence of fill. All soils were screen through mesh no greater than 6mm and all test pits were backfilled. All work was photo documented.

During the 5m test pit survey, no archaeological resources were encountered.

Approximately 70% of the study area consisted of ploughable lands that were pedestrian surveyed at an interval of 5 metres between transects. Approximately 21% of the study area was a variety of unploughable meadow, lawn, and wooded area that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 9% of the study area was not assessable due to the presence of existing structures, steep slope, low-lying wet area and disturbed gravel driveway. Maps 5, 6 & 7 of this report illustrate the Stage 2 Assessment methodology within the study area.

3.0 RECORD OF FINDS

3.1 INTRODUCTION

As a result of the Stage 1-2 Assessment of the study area, 1 isolated Pre-contact lithic find was encountered. In accordance with the Saugeen Ojibway Nation's Standards and Guidelines Section 6.2 *Site Significance*, the isolated Pre-contact lithic find has been assigned a Borden Number and registered in the MCM's Ontario Archaeological Site Database. Additionally, all registered archaeological sites regardless of size and artifact density must be subject to a Stage 3 Site Specific Assessment. Accordingly, the Allan Park Road Site (BbHf-10) consisting of Isolated Find 1 must be subjected to a Stage 3 Site Specific Assessment. The number and types of artifacts collected from the Allan Park Road Site (BbHf-10) are

listed below in Table 3. A description of the artifact collected from the Allan Park Road Site (BbHf-10) can be found below in section 3.3 and appended to this report in Appendix A. Detailed description of the location of these sites can be found in the supplementary information package of this report filed under separate cover with the MCM.

The catalogue of this report details artifact categories, material, provenience, measurements and heat alteration where applicable. The following sources were consulted: Cherts of Southern Ontario (Eley & von Bitter 1989), The Basics of Biface Knapping in the Eastern Fluted Point Tradition, a Manual for Flintknappers and Lithic Analysts. (Callahan, Errett 1979), The Production of Stone Tools, (Museum of Indian Archaeology n.d.), Lithic Identification and Analysis (SCARF 2013), The Archaeology of Southern Ontario to A. D. 1650 (Ellis & Ferris 1990), and the library of AMICK Consultants Limited.

3.2 ALLAN PARK ROAD SITE (BBHF-10)

The Allan Park Road Site (BbHf-10) is a Pre-contact isolated artifact found on the surface of an active agricultural field. The Pre-contact artifact collected from the site is a piece of chipping detritus; specifically, a tertiary flake of Bois Blanc chert (Isolated Find 1). This flake measures 14 mm in length, 8 mm in width, and 3 mm in thickness. Debitage or chipping detritus, is the remaining waste material as a result of the tool manufacturing process. The category is further divided into primary, secondary, tertiary, and (biface) thinning flakes. Primary flakes exhibit cortex on the dorsal face and cortex; secondary flakes exhibit cortex on approximately half of the dorsal face but have no cortex on the platform; tertiary flakes exhibit little to no cortex; thinning flakes are relatively flat, have broad, shallow flake scars, the proximal end of the flake often retains the edge of the biface and, if the platform is retained, it often exhibits a low angle and evidence of crushing or grinding. If a flake is missing the proximal, or distal ends it is described as fragmentary; if a piece of debitage is recovered without a distinct ventral or dorsal surface, it is described as shatter. The number and types of artifacts collected from the Allan Park Road Site (BbHf-10) are listed below in Table 1. Descriptions of these artifact types can be found appended to this report in Appendix 1.

TABLE 3 ALLAN PARK ROAD SITE (BBHF-10) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Tertiary Flake of Bois Blanc chert	1	100%

The collection of artifacts from this assessment is packaged in a single banker's box and housed at the Exeter office of AMICK Consultants Limited until such time as an appropriate permanent location, as approved by MCM, is located and appropriate arrangements for the transfer of the collection and associated responsibilities for the material is made.

The documentation produced during the field investigation conducted in support of this report includes: one sketch map, one page of photo log, one page of field notes, and 126 digital photographs.

4.0 ANALYSIS AND CONCLUSIONS

4.1 STAGE 1 ANALYSIS AND CONCLUSIONS

4.1.1 CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics include:

1) Within Proximity of Previously Identified Archaeological Sites

2) Within Proximity of Primary Water Sources (e.g., lakes, rivers, streams, and creeks)

3) Within Proximity of Secondary Water Sources (e.g., intermittent streams and creeks, springs, marshes, and swamps)

4) Within Proximity of Features Indicating Past Water Sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches)

5) Within Proximity of an Accessible or Inaccessible Shoreline (e.g., high bluffs, swamp, or marsh fields by the edge of a lake, sandbars stretching into marsh)

6) Elevated Topography (e.g., eskers, drumlins, large knolls, and plateaux)

7) Pockets of Well-drained Sandy Soil, especially near areas of heavy soil or rocky ground.

8) 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.

9) Resource Areas, including:
   - food or medicinal plants (e.g., migratory routes, spawning areas, and prairie)
   - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
   - resources of importance to early Post-contact industry (e.g., logging, prospecting, and mining)

10) Within Proximity of Areas of Early Post-contact Settlement, including:
    - military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes)
    - early wharf or dock complexes, pioneer churches and early cemeteries

11) Within Proximity of Early Historical Transportation Routes (e.g., trails, passes, roads, railways, portage routes)

12) Heritage Property – A property listed on a municipal register or designated under the Ontario Heritage Act or is a federal, provincial, or municipal historic landmark or site.

13) Documented Historical or Archaeological Sites – property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

The study area is situated 45 metres west of the Saugeen River which is a primary water source and a navigable waterway. The study area is situated within 100m of an early settlement road that appears on the historic atlas maps of 1881. This historic road corresponds to the road presently known as Allan Park Road which is directly adjacent to the study area on its eastern edge. The study area is located within 1 kilometre of a previously recorded archaeological site related to the Post-Contact period.

4.1.2 Characteristics Indicating Removal of Archaeological Potential

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011). These characteristics include:

1) Quarrying

2) Major Landscaping Involving Grading Below Topsoil

3) Building Footprints

4) Sewage and Infrastructure Development

The study area contains a farm complex consisting of a house, a gravel driveway, and a garage.

4.1.3 Summary of Archaeological Potential

Table 4 below summarizes the evaluation criteria of the Ministry of Citizenship and Multiculturalism together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water, the location of early historic settlement roads adjacent to the study area, elevated topography, and known archaeological sites within 1 kilometre.

TABLE 4 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 1km	**Y**			If Yes, potential determined
PHYSICAL FEATURES					
2	Is there water on or near the property?	**Y**			If Yes, what kind of water?
2a	Primary water source (lakeshore, river, large creek, etc.)	**Y**			If Yes, potential determined
2b	Secondary water source (stream, spring, marsh, swamp, etc.)	**Y**			If Yes, potential determined
2c	Past water source (beach ridge, river bed, relic creek, etc.)		**N**		If Yes, potential determined
2d	Accessible or Inaccessible shoreline (high bluffs, marsh, swamp, sand bar, etc.)		**N**		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)	**Y**			If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		**N**		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		**N**		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES					
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		**N**		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Post-contact settlement area		**N**		If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route (historic road, trail, portage, rail corridors, etc.)	**Y**			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		**N**		If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION					
10	Local knowledge (local heritage organizations, Pre-contact, etc.)		**N**		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)	**Y**			If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**
If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**
If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

4.2 STAGE 2 ANALYSIS AND CONCLUSIONS

As a result of the Stage 1-2 Assessment of the study area, 1 isolated Pre-contact lithic find was encountered. In accordance with the Saugeen Ojibway Nation's Standards and Guidelines Section 6.2 *Site Significance,* the isolated Pre-contact lithic find has been assigned a Borden Number and registered in the MCM's Ontario Archaeological Site Database. Additionally, all registered archaeological sites regardless of size and artifact density must be subject to a Stage 3 Site Specific Assessment. Accordingly, the Allan Park Road Site (BbHf-10) consisting of Isolated Find 1 must be subjected to a Stage 3 Site Specific Assessment.

5.0 RECOMMENDATIONS

5.1 STAGE 1-2 RECOMMENDATIONS

As a result of the property Assessment of the study area, one isolated artifact was documented. In accordance with the Saugeen Ojibway Nation's Standards and Guidelines Section 6.2 *Site Significance,* the isolated Pre-contact lithic find has been assigned a Borden Number and registered in the MCM's Ontario Archaeological Site Database. Additionally, all registered archaeological sites regardless of size and artifact density must be subject to a Stage 3 Site Specific Assessment. Isolated Find 1 has been registered as the Allan Park Road Site (BbHf-10). Based on the characteristics of this site and the analysis of artifact, the following recommendations are made:

5. *The Cultural Heritage Value or Interest (CHVI) of the Allan Park Road Site (BbHf-10) has not been completely documented. There is potential for further CHVI for this location. The Allan Park Road Site (BbHf-10) requires Stage 3 Site-specific Assessment to gather further data to determine if Stage 4 Mitigation of Development Impacts will be required.*
6. *A Stage 3 Site-specific assessment of the Allan Park Road Site (BbHf-10) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the SON Archaeology Standards and Guidelines (Saugeen Ojibway Nation 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Infill units will amount to 20% of the grid unit total, focusing on areas of interest within the site extent. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6-millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011).*
7. *The Stage 3 Site-specific Assessment of the Allan Park Road Site (BbHf-10) Site must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*

8. *A CSP has been completed as part of the Stage 2 Property Assessment and is not required as part of the Stage 3 Site-specific Assessment of the Allan Park Road (BbHf-10) Site as this component of the Stage 3 requirements is already satisfied.*

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

a. *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 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.*

b. *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.*

c. *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 archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.*

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

e. *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.*

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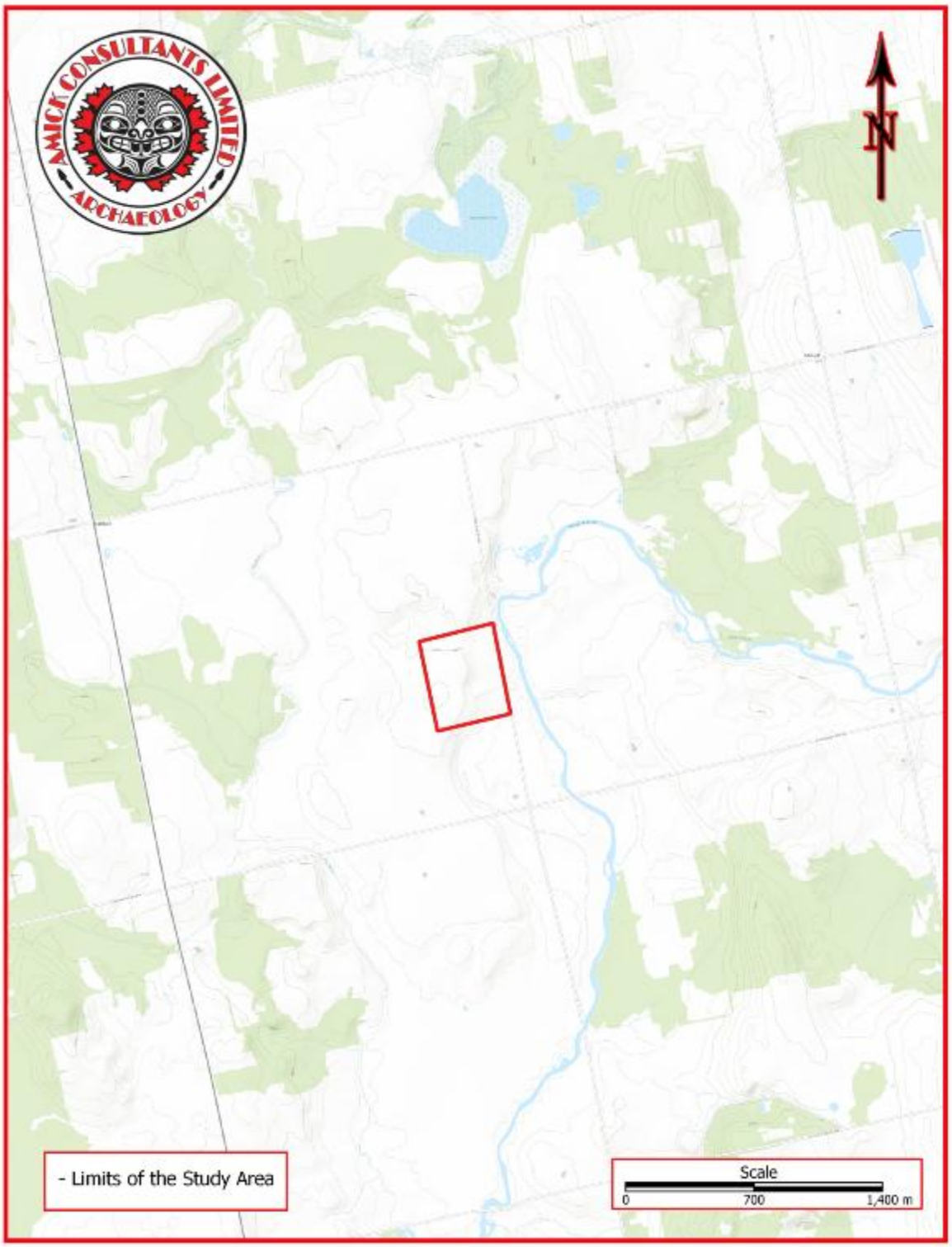
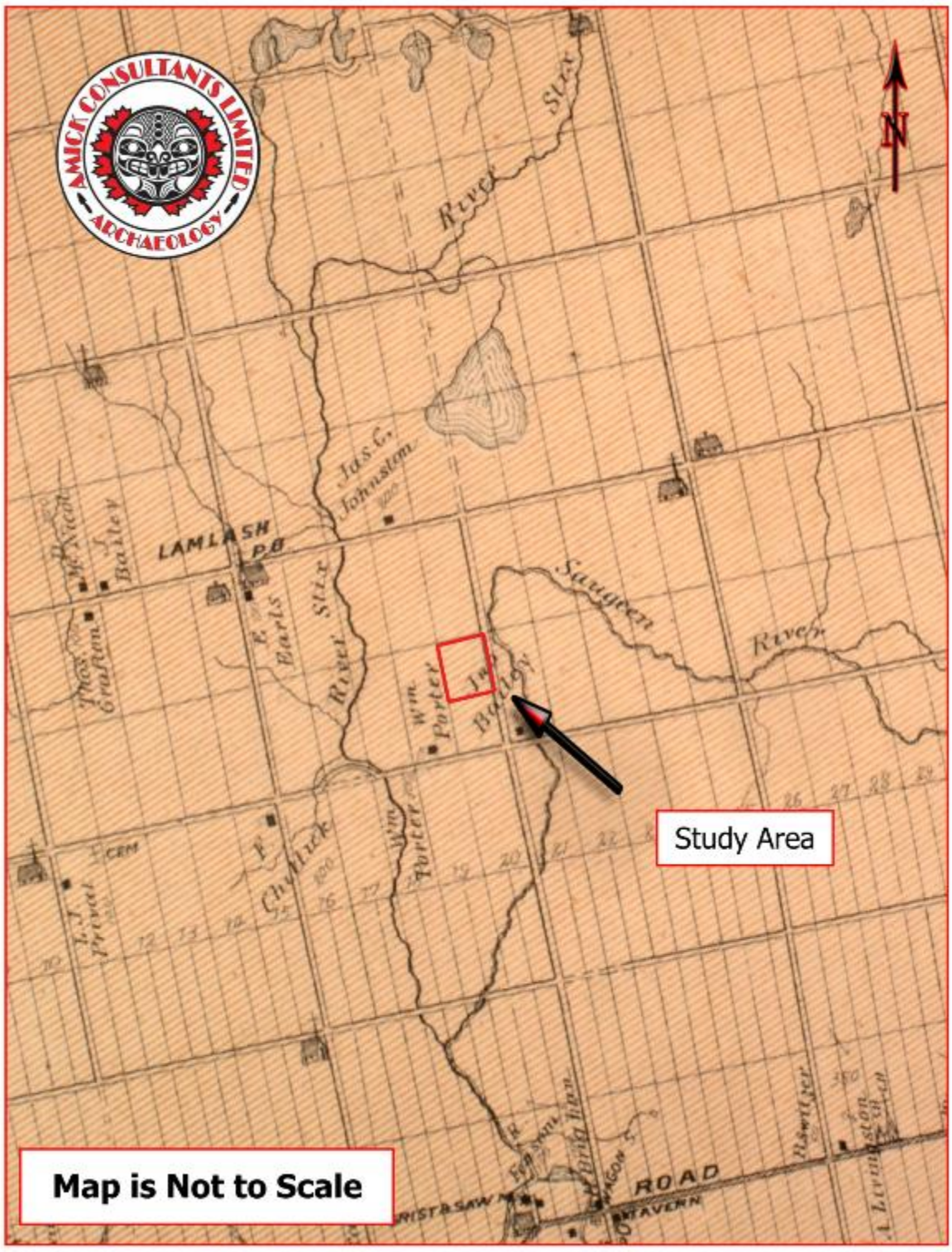
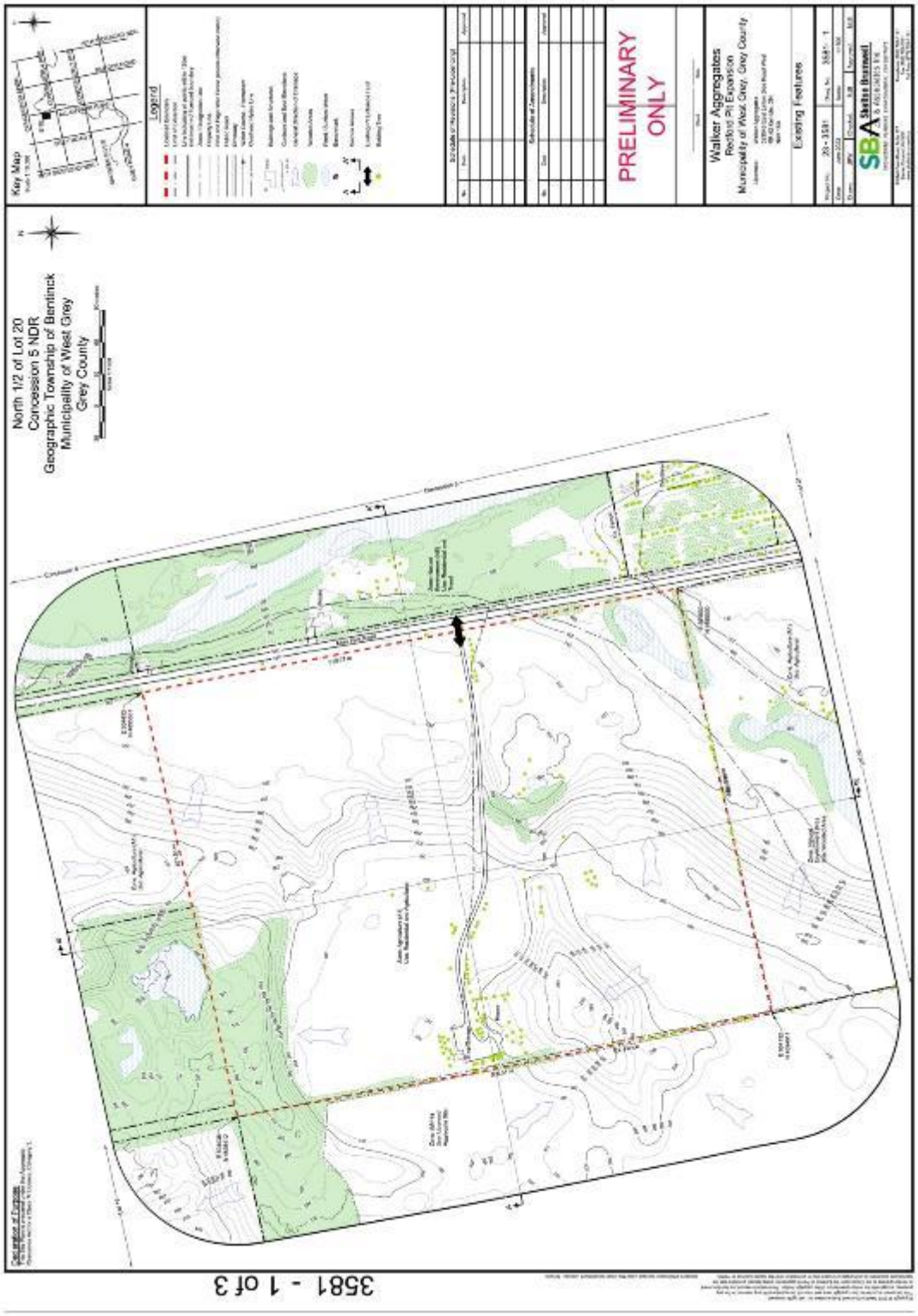
MAPS



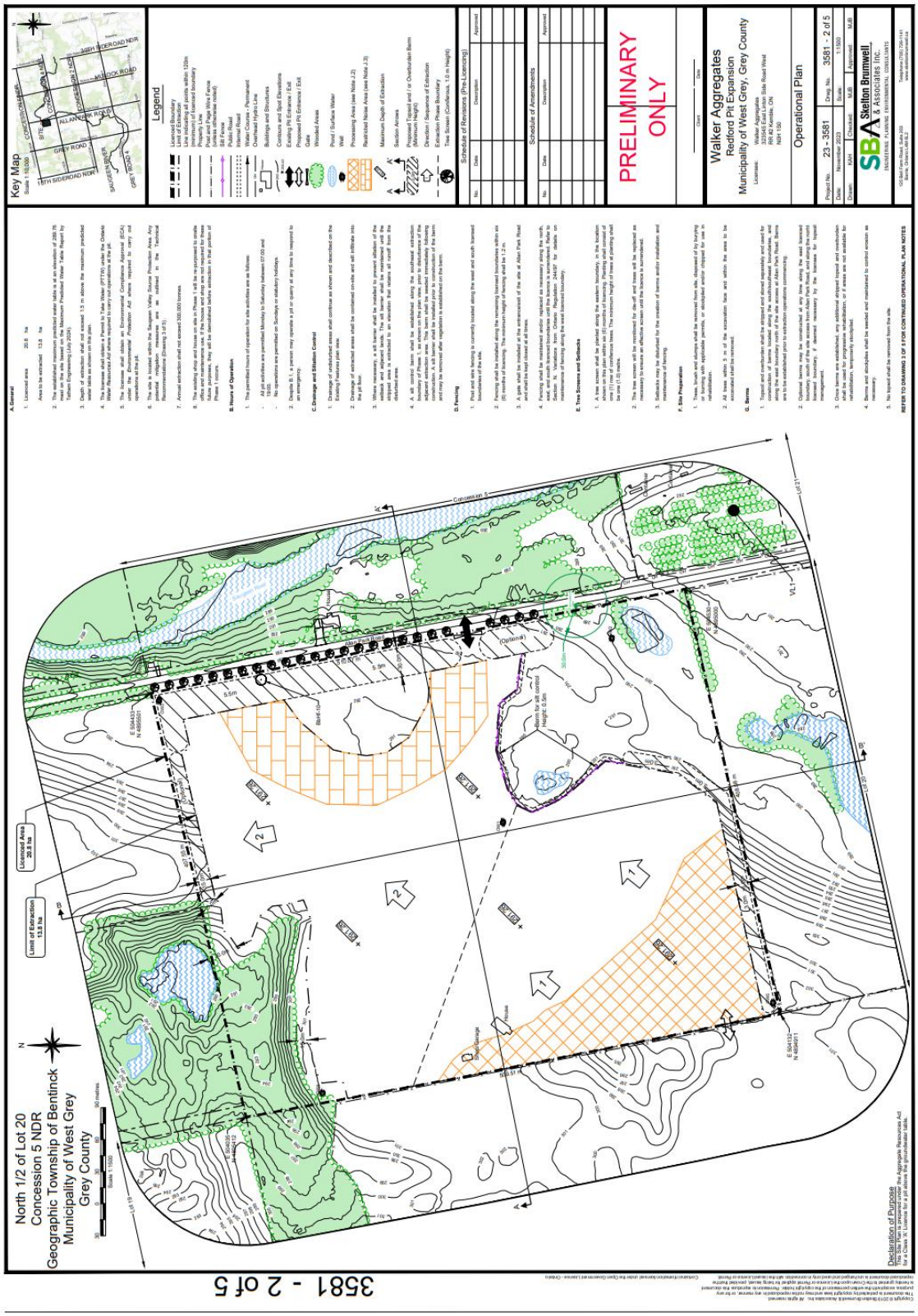
MAP 1 LOCATION OF THE STUDY AREA (ESRI 2019)



MAP 2 FACSIMILE SEGMENT OF THE ILLUSTRATED ATLAS OF THE DOMINION OF CANADA (BELDEN 1881)

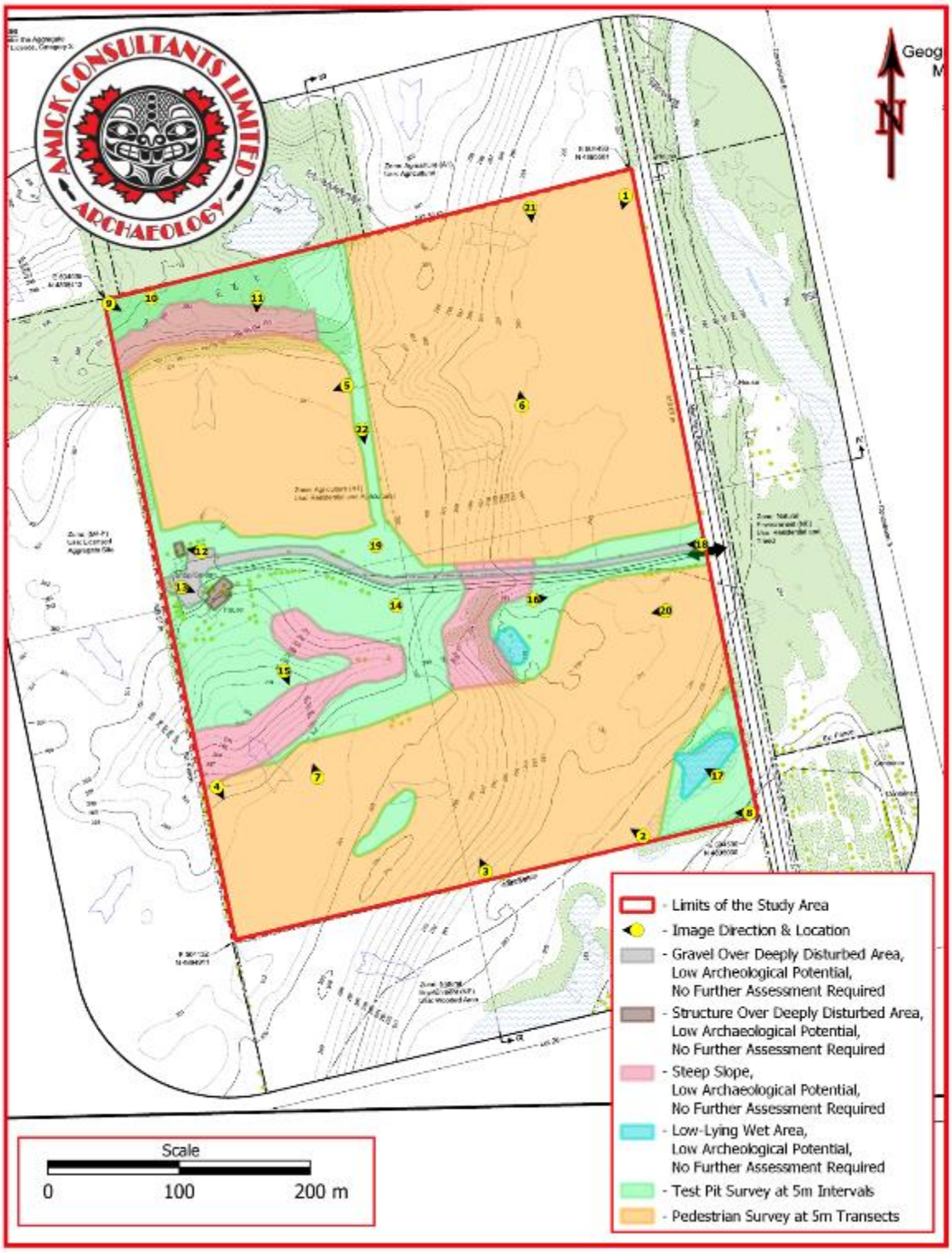


MAP 3 EXISTING FEATURES PLAN 1 OF 5 (SKELTON BRUMWELL & ASSOCIATES INC., DRAFT 2023)

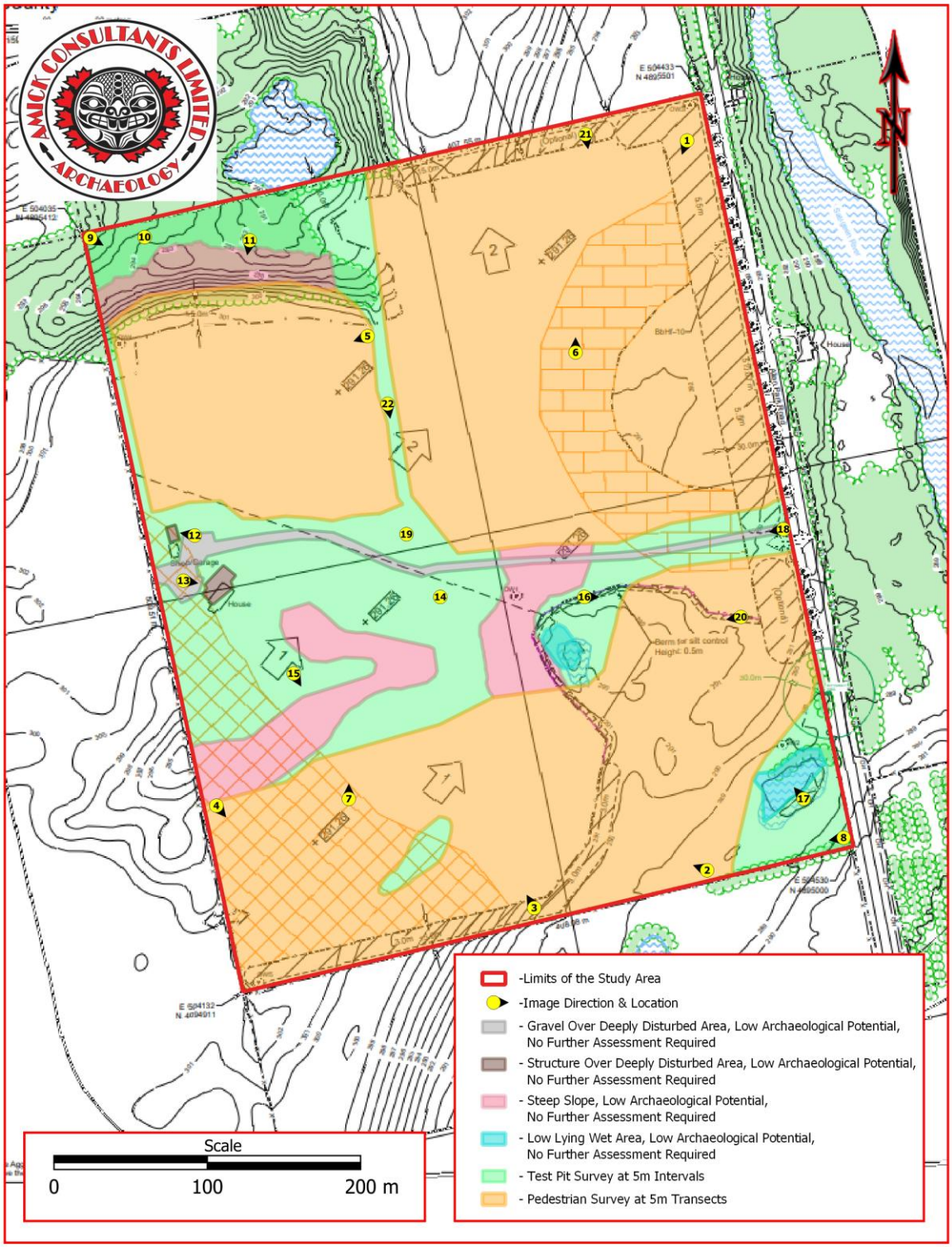


MAP 4 OPERATIONAL PLAN 2 OF 5 (SKELTON BRUMWELL & ASSOCIATES INC., DRAFT 2023)

MAP 5 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2016)



MAP 6 DETAILED PLAN OF THE STUDY AREA (AFTER SKELTON BRUMWELL & ASSOCIATES OPERATIONAL PLAN 1 OF 5 2023)



MAP 7 DETAILED PLAN OF THE STUDY AREA (AFTER SKELTON BRUMWELL & ASSOCIATES OPERATIONAL PLAN 2 OF 5 2023)

IMAGES

IMAGE 1 PEDESTRIAN SURVEY CONDITIONS

IMAGE 2 PEDESTRIAN SURVEY CONDITIONS

IMAGE 3 5 METRE PEDESTRIAN SURVEY

IMAGE 4 PEDESTRIAN SURVEY CONDITIONS

IMAGE 5 5 METRE PEDESTRIAN SURVEY

IMAGE 6 PEDESTRIAN SURVEY CONDITIONS

IMAGE 7 5 METRE PEDESTRIAN SURVEY

IMAGE 8 UNPLOUGHABLE MEADOW

IMAGE 9 WOODED AREA

IMAGE 10 COMPLETED TEST PIT

IMAGE 11 STEEP SLOPE

IMAGE 12 GARAGE

IMAGE 13 HOUSE AND GRAVEL DRIVEWAY

IMAGE 14 COMPLETED TEST PIT

IMAGE 15 5 METRE TEST PIT SURVEY & SLOPE

IMAGE 16 5 METRE TEST PIT SURVEY

IMAGE 17 POND	**IMAGE 18 GRAVEL DRIVEWAY**
	
IMAGE 19 COMPLETED TEST PIT	**IMAGE 20 5 METRE PEDESTRIAN SURVEY**
	
IMAGE 21 PEDESTRIAN SURVEY CONDITIONS	**IMAGE 22 5 METRE TEST PIT SURVEY**
	
IMAGE 23 ISOLATED FIND 1 DORSAL FACE	**IMAGE 24 ISOLATED FIND 1 VENTRAL FACE**

APPENDIX A: ARTIFACT CATALOGUE

CAT #	Provenience #	Layer	Description	Material	Type	Burnt	L (mm)	W (mm)	Th (mm)	Comments	Qty
1	Isolated Find 1	N/A	Lithic Debitage	Chert- Bois Blanc	Tertiary Flake	N	14	8	3	Flake scars present on dorsal face, bulb of percussion present on ventral face, partial platform	1

APPENDIX B: PRE-CONTACT ARTIFACT TYPE DESCRIPTIONS

The following descriptions serve as a general description of tool types or pottery styles and represents a comprehensive, but not exhaustive, reference guide for identifiable objects and is not limited to finds specific to a particular project or site assemblage.

Pottery

Rim Sherds and Fragmentary Rim Sherds

The presence of diagnostic artifacts such as decorated pottery fragments known as castellations, rim sherds and fragmentary rim sherds assist in the determination of the temporal and cultural affiliation of sites. Middle to Late Woodland typology of the Niagara area has not been developed to the extent of Iroquioan ceramics. Therefore, the rims have been documented through attribute analysis.

For the purposes of this discussion, a rim sherd must possess sufficient portions of the interior, lip, rim, exterior, and neck portions of the original vessel. An artifact possessing some but not all of the above mentioned attributes is considered a fragmentary rim sherd.

Fragmentary Sherds

Fragmentary sherds are those pieces which are smaller than a 25 cent piece, are missing either the interior or exterior and are undecorated. Construction method is very difficult to determine in such small or incomplete pieces.

Lithics

Lithic Debitage

Debitage or chipping detritus, is the remaining waste material as a result of the tool manufacturing process. The category is further divided into primary, secondary, tertiary, and (biface) thinning flakes. Primary flakes exhibit cortex on the dorsal face and cortex; secondary flakes exhibit cortex on approximately half of the dorsal face but have no cortex on the platform; tertiary flakes exhibit little to no cortex; thinning flakes are relatively flat, have broad, shallow flake scars, the proximal end of the flake often retains the edge of the biface and, if the platform is retained, it often exhibits a low angle and evidence of crushing or grinding. If a flake is missing the proximal, or distal ends it is described as fragmentary; if a piece of debitage is recovered without a distinct ventral or dorsal surface, it is described as shatter.

Retouched/Utilized Flakes

A retouched flake exhibits unifacial or bifacial reworking often as a means of creating or maintaining a working edge. Retouched flakes often exhibit small flake scars. A utilized

flake is unifacially reduced and generally considered to be expedient. Polishing, rounding, and microchipping fractures are all indicators of use and can be accurately identified using at least 100X magnification. Since microscopic analysis was not performed on the current assemblage, the characterization of use-wear cannot be accurately determined; therefore, only the presence or absence of macroscopically visible flake scars were noted.

Shatter

Shatter is also categorized as debitage. Shatter consists of waste fragments that are angular and blocky and do not show the typical characteristics of a reduction flake (i.e., absence of bulb of percussion, striking platforms, or dorsal flake scars).

Projectile Points/Point Fragments/Point Preforms

A projectile point is an object that was hafted to weapon that was capable of being thrown or projected, such as a spear, dart, or arrow, or perhaps used as a knife.

A projectile point preform is often an ovate or triangular shaped rock that has been flaked on both sides using percussion and pressure flaking techniques. A projectile point fragment is often an ovate or triangular shaped rock that has been flaked on both sides using percussion and pressure flaking techniques and conforms to the general size and shape of a projectile point but has been fractured and discarded. This type of artifact was likely either in the early stages of becoming some form of tool before it was discarded by the flintknapper, was fractured in use or was reworked until exhaustion.

Formal Tool Types

Bifaces

The term biface here is used to describe an artifact that was subject to flake reduction on both surfaces but cannot be assigned to a formal tool category.

Scrapers

A scraper is a unifacial tool of varying in shape, size, and location of the working edge(s). Scrapers are typically formed by chipping the end of a flake of stone in order to create one sharp side and to keep the rest of the sides dull to facilitate grasping it. Most scrapers are either circle or blade-like in shape. The working edges of scrapers tend to be convex, and many have trimmed and dulled lateral edges to facilitate hafting. Scrapers are thought to have been used for hide-working and woodworking.

Spokeshave

A spokeshave is a unifacial tool of varying in shape, size, and location of the working edge(s). Similar to scrapers, spokeshaves exhibit a pronounced concave working edge thought to have been used to shape spear or arrow shafts and bows.

Drills

A drill is an elongated tool used for making holes and perforations. When made of stone, drills are frequently a bifacially worked tool of equal width and thickness and often t-shaped to facilitate hafting; however, examples of thin t-shaped drills have been encountered. Drills could sometimes be repurposed tips of exhausted bifaces or projectile points.

Perforators/Gravers

Perforators, gravers, piercers, borers and awls are formal tools that exhibit fine unifacial or bifacial retouching in order to accentuate a fine, triangular point. These tools serve a variety of purposes that involve piercing, incising, or engraving materials.

Informal Tool Types

Cores

Cores are the initial nodes of material that are subject to the reduction process in order to manufacture tools using either the waste flakes struck off the core or the core itself. An exhausted core is node which no longer produces desirable flakes and was discarded by the flint knapper.

Fire bow drill base

A bow drill base is an object of stone or wood that was used to hold the base of the drill shaft and tinder to create an ember used to start a fire. The downward pressure and rotation of the drill shaft against the stone creates heat, which eventually creates powdered charcoal and ignites to form a small ember. Bow drill bases exhibit horizontal striations within small, circular boreholes.

Ground Stone Tools

Adzes, Axes, and Celts

An adze is an elongated ground stone tool with one sharpened edge typically used as a wood-working tool. An adze differs from an axe or celt in a couple of typological and ethnographically documented ways. Typologically, adzes are bifacial tools with a pronounced asymmetry and a plano-convex cross-section; axes are generally symmetrical bifacial tools with biconvex cross-sections. Ethnographically, axes are used for hewing trees and the ground stone tool head is set in the handle so the working edge is parallel to the handle. In contrast, adzes are used for shaping wood and the ground stone tool head is set in

the handle so the working edge is perpendicular to the handle. The difference between celts and axes is that celts are ungrooved.

Hammerstone

A hammerstone is a hard, stone cobble used to remove lithic flake from cores during lithic tool reduction. Hammerstones can also be used to grind, crush, and polish tool edges; to process minerals such as iron ore; or in food-processing (nuts, marrow extraction).

Abraders

Abraders are a multi-functional tool type that can be used for sharpening, shaping, grinding, polishing, or smoothing organic and inorganic materials. Abraders are usually made of granular, relatively soft stone, such as sandstone, and can range in size from large and flat to hand-sized stones. They are typified by abrasion marks or worn grooves along the surface of the stone in U- or V-shapes, the width of which can imply what materials the abrader was used to manipulate. Abraders will often exhibit a polished edge.

Faunal Tools

Modified Bone Fragments

Modified bone fragments are those pieces which are not formal artifact types but exhibit evidence of cultural modification.

Bone Awls

Bone awls are perforating tools, manufactured primarily from long bones and tapered to a point at one end.