



REVISED: 25 FEBRUARY 2025

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT

*968 St. David Street North & 6581 Highway 6 North,
Part of Lots 17 & 18, Concession 16,
(Geographic Township of Nichol), Town of Fergus, Wellington County (AMICK
Corporate Project #2024-656/MCM File #P038-1483-2024)*

SUBMITTED TO:

Ontario Ministry of Citizenship and Multiculturalism (MCM)

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MCM SITE RECORD: AkHc-30

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25 FEBRUARY 2025

EXECUTIVE SUMMARY

This report describes the results of the 2024 Stage 1-2 Archaeological Property Assessment of 968 St. David Street North & 6581 Highway 6 North, Lot 18, Concession 16, (Geographical Township of Nichol), Town of Fergus, Wellington County, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning 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 38.71 hectares (ha) in area and includes within it ploughable lands and two farm complexes. The farm complex in the northern portion of the study area consists a house, a garage, a barn, two silos, a shed, and an outbuilding. The farm complex in the southern portion of the study area consists of a house, a barn, a silo, a shed, and three outbuildings. The study area is bounded on the north by farmland, on the east by farmland, on the south by farmland, meadow area, and Jiggin' Jody's Seafood and on the west by St. David Street North. 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 5 metres between individual transects on 02 August, 14 September, 11 & 18 October 2024. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the corporate office 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.

As a result of the property Assessment of the study area, one historic site, the 24-656H1 (AkHc-30) Site, was identified. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the 24-656H1 (AkHc-30) Site has not been completely documented. There is potential for further CHVI for this location. The 24-656H1 (AkHc-30) Site 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 24-656H1 (AkHc-30) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 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. 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 at the corporate office of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario MCM (MCM) on behalf of the government and citizens of Ontario.*
3. *The Stage 3 Site-specific Assessment of the 24-656H1 (AkHc-30) Site must include further archival research to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

This report describes the results of the 2024 Stage 1-2 Archaeological Property Assessment of 968 St. David Street North & 6581 Highway 6 North, Lot 18, Concession 16, (Geographical Township of Nichol), Town of Fergus, Wellington County, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning 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 38.71 hectares (ha) in area and includes within it ploughable lands and two farm complexes. The farm complex in the northern portion of the study area consists a house, a garage, a barn, two silos, a shed, and an outbuilding. The farm complex in the southern portion of the study area consists of a house, a barn, a silo, a shed, and three outbuildings. The study area is bounded on the north by farmland, on the east by farmland, on the south by farmland, meadow area, and Jiggin' Jody's Seafood and on the west by St. David Street North. 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 5 metres between individual transects on 02 August, 14 September, 11 & 18 October 2024. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the corporate office 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 a mix of low and medium density residential dwellings for a total of 710 – 941 units that includes 10 - 16 mixed-use dwellings. Additional uses include a stormwater management facility, parkland, open space, six roads, and environmental protection area. A preliminary plan of the proposed development has been submitted together with this report to MCMS for review and reproduced within this report as Map 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 an 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

In 1837 by Act of Parliament the new District of Wellington was formed and a courthouse and jail in the town of Guelph were authorized. The District was named after England's Duke of Wellington and initially included the counties of Wellington, Waterloo, Grey and parts of Dufferin (Wikipedia 2017).

By January 1854, Wellington County became an individual entity. At the time, it included the Townships and Towns of Amaranth, Arthur, Eramosa, Erin, Guelph, Guelph (Town), Garafraxa, Maryborough, Nichol, Peel, Pilkington, and Puslinch. Other municipalities were added between 1857 and 1881. Guelph separated in 1879 and was incorporated as a City; it lost representation on the County Council. Orangeville and Garafraxa East were annexed by Dufferin County (Wikipedia 2017).

Map 2 is a facsimile segment from Historical County Map of Wellington County (Leslie 1861). Map 2 illustrates the location of the study area and environs as of 1861. The northern portion of the study area (part of lot 17) is shown to belong to John Watt, and the southern portion of the study area (part of lot 18) is shown to belong to Alex Lillie. 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, a settlement road is depicted as adjacent to the study area to the west. This road is the current St. David Street North.

Map 3 is a facsimile segment of the Township of Nichol map reproduced from The Illustrated Historical Atlas of Waterloo and Wellington Counties (Walker & Miles 1877). Map 3 illustrates the location of the study area and environs as of 1877. The northern portion of the study area (part of lot 17) is shown to belong to W. Tundale, and the southern portion of the study area (part of lot 18) is shown to belong to G. Laing; 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, a settlement road is depicted as adjacent to the study area to the west. This road is the current St. David Street North.

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

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 and in an area well populated during the nineteenth century and therefore has potential for sites relating to early Post-contact settlement in the region. However, it also appears that while the area was moving toward urban development by the fourth quarter of the 19th century, it was still

predominantly rural in character and the likelihood of locating significant Post-contact archaeological deposits of cultural heritage value or interest (CHVI) on a very small parcel of the original township lot is not likely. 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. An unnamed water course is located approximately 120 metres south of the study area.

1.3 ARCHAEOLOGICAL CONTEXT

The study area is located in Fergus and is bounded on the north by farmland, on the east by farmland, on the south by farmland, meadow area, and Jiggin' Jody's Seafood and on the west by St. David Street North.

The study area contains a ploughable lands and two farm complexes. The farm complex in the northern portion of the study area consists a house, a garage, a barn, two silos, a shed, and an outbuilding. The farm complex in the southern portion of the study area consists of a house, a barn, a silo, a shed, and three outbuildings. An unnamed water course is located approximately 120 meters south of the study area. A low-lying wet area is present in the northeastern corner of the study area.

1.3.1 PHYSIOGRAPHIC REGION

The study area is situated within the Guelph Drumlin Field physiographic region. For the most part, these hills are of the broad oval type with slopes less steep than the Peterborough drumlins. The till in these drumlins is loamy and calcereous and was derived mostly from dolostone of the Amabel Foundation. In addition, it contains fragments of the underlying red shale which is exposed below the escarpment. It is a pale brown in colour. The till is rather stony with large surface boulders being more numerous in some localities than others (Chapman and Putnam 1984: 137-138).

1.3.2 SURFACE WATER

An unnamed water course is located approximately 120 metres south of the study area. Additionally, the northeastern corner of the study area consists of permanently low-lying wet areas.

1.3.3 LITHIC SOURCES

The study area is not located in close proximity to any lithic sources.

1.3.4 REGISTERED ARCHAEOLOGICAL SITES

The Archaeological Sites Database administered by the MCMS indicates that there are three (3) previously documented sites 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 no (0) archaeological sites relating directly to Post-contact habitation/activity had been formally registered within the immediate vicinity of the study area.

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 three (3) archaeological sites of unknown cultural affiliation have been formally registered within the immediate vicinity of the study area. All previously registered sites of unknown cultural affiliation are briefly described below in Table 2:

TABLE 2 REGISTERED SITES OF UNKNOWN CULTURAL AFFILIATION WITHIN 1KM

Borden #	Site Name	Time Period	Affinity	Site Type
AkHc-25	Ford Family Farmstead 3			
AkHc-24	Ford Family Farmstead 2			
AkHc-23	Ford Family Farmstead 1			

These sites demonstrate archaeological potential for further archaeological resources related to human activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.5 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

Background research shows that two (2) previous studies have taken place within 50m of the study area. For further information see:

AMICK Consultants Limited. (2009). *Report on the 2009 Stage 1-2 Archaeological Assessment of Part of Lot 17, Concession 15, (Geographic Township of Nichol), and Part of Lots 3, 4, 12, 13, 14, 16 and 17, Registered Plan 87, (Geographic Township of Nichol), now all in the Township of Centre Wellington, County of Wellington and being those lands more particularly designated as Parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 as shown on Deposited Plan 61R-4789. The above lands are all of Pins 71383-0013 and 71383-0014.*. Port McNicoll, Ontario. Archaeological License Report on file with MCM, Toronto, Ontario (Amick File # 2822-P/MCM File #P058-381-2008, P058-416-2009).

Stantec. (2023). *Stage 1-2 Archaeological Assessment: Proposed Development at 950-960 St. David Street North Part of Lot 19, Concession 16, Geographic Township of Nichol, now Township of Centre Wellington, Wellington County, Ontario.* London, Ontario. Archaeological License Report on file with MCM, Toronto, Ontario (Project # 161414172/MCM File #P256-0737-2022).

An overview of the location of these assessments can be found in Map 7.

1.3.5.1 AMICK CONSULTANTS LIMITED (2009)

In 2008, AMICK Consultants Limited conducted a Stage 1-2 Archaeological Property Assessment of Part of Lot 17, Concession 15, (Geographic Township of Nichol), and Part of Lots 3, 4, 12, 13, 14, 16 and 17, Registered Plan 87, (Geographic Township of Nichol), now all in the Township of Centre Wellington, County of Wellington and Being Those Lands more Particularly Designated as Parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 as Shown on Deposited Plan 61R-4789, The Above Lands are all of Pins 71383-0013 and 71383-0014. This assessment took place south of the current study area, across St. David Street North. The following is the executive summary of the Stage 1-2 Archaeological Assessment and the resulting recommendations:

“This report describes the results of the Stage 1-2 Archaeological Assessment Part of Lot 17, Concession 15, (Geographic Township of Nichol), and Part of Lots 3, 4, 12, 13, 14, 16 and 17, Registered Plan 87, (Geographic Township of Nichol), now all in the Township of Centre Wellington, County of Wellington and Being Those Lands more Particularly Designated as Parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 as Shown on Deposited Plan 61R-4789, The Above Lands are all of Pins 71383-0013

and 71383-0014, conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting License #P058 issued to Michael Henry by the Minister of Culture for the Province of Ontario. This investigation was undertaken in order to address anticipated conditions of Draft Plan approval. All work was conducted in conformity with the guidelines as stipulated within the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake this assessment, and was granted permission to carry out archaeological fieldwork on the subject property on August 6, 2008. Those portions of the property which did not consist of previous disturbance or low lying and wet lands were subject to physical assessment May 12, 2009, consisting of high-intensity test pit survey at an interval of five metres between individual test pits and high intensity pedestrian survey at an interval of five metres between individual transects.

As a result of the physical assessment of the subject property 1 isolated First Nations find spot was encountered. No further archaeological investigations are recommended for the isolated findspot as it represents few artifacts over a large area and further investigation of this find is unlikely to result in further information.”
(AMCIK Consultants Limited, 2009)

1.3.5.2 STANTEC (2023)

In 2023, Stantec conducted a Stage 1-2 Archaeological Property Assessment of part of Lot 19, Concession 16, Geographic Township of Nichol, now Township of Centre Wellington, Wellington County, Ontario, which is directly adjacent to the south of the current study area. The following is the executive summary of the Stage 1-2 Archaeological Assessment and the resulting recommendations:

“Stantec Consulting Ltd. (Stantec) was retained by Reid’s Heritage Homes (the Client) to conduct Stage 1-2 archaeological assessment in advance of a proposed residential development (the Project) on part of Lot 19, Concession 16, Geographic Township of Nichol, now Township of Centre Wellington, Wellington County, Ontario. Overall, the study area for the Project is approximately 1.9 hectares. The Stage 1-2 assessment conducted by Stantec was triggered by the Provincial Policy Statement (PPS) which has been issued under section 3 of the Planning Act (Government of Ontario 1990a). The PPS states that decisions affecting planning matters may be affected by other legislation; for archaeological work that would include the Ontario Heritage Act (Government of Ontario 1990b). According to Section 2.6.2 of the PPS, “development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved” (Government of Ontario 2020:31).

The Stage 1-2 archaeological assessment of the study area was conducted under Project Information Form number P256-0737-2022 issued to Parker Dickson, MA, of

Stantec by the Ministry of Citizenship and Multiculturalism (the Ministry). The Stage 1 archaeological assessment determined that the study area retained archaeological potential and Stage 2 archaeological assessment was required. The Stage 2 archaeological assessment of the study area was conducted on October 27, 2022.

No archaeological resources were identified during the Stage 1-2 archaeological assessment of the study area. Thus, in accordance with Section 2.2 and Section 7.8.4 of the Ministry's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), no further archaeological assessment of the study area is recommended."

(Stantec 2023, p.ii).

1.3.5.3 PREVIOUS REGIONAL ARCHAEOLOGICAL POTENTIAL MODELLING

The study area is situated in area for which there is no archaeological master plan.

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 ploughable lands and two farm complexes. The farm complex in the northern portion of the study area consists a house, a garage, a barn, two silos, a shed, and an outbuilding. The farm complex in the southern portion of the study area consists of a house, a barn, a silo, a shed, and three outbuildings. An unnamed water course is located approximately 120 meters south of the study area. A low-lying wet area is present in the northeastern corner of the study area.

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, areas under gravel and asphalt surfaces. 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 Guelph Drumlin Field physiographic region, which is characterized by till that is loamy and calcerous. In addition, the study area is not located in close proximity to any lithic sources.

A total of three (3) previously registered archaeological sites have been documented within 1km of the study area. Of these, none are Pre-contact, none are Post-contact and three are of unknown cultural affiliation. These sites demonstrate archaeological potential for further archaeological resources of Pre-contact and/or 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 proximity to a source of potable water. Background research also suggests potential for archaeological resources of Post-contact origins based on 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 and 6. 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 of this report

The Stage 2 Assessment of the study area was carried out on 02 August, 14 September, 11 & 18 October 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 5 metres between individual transects which was conducted in compliance with the Standards and Guidelines for Consultant Archaeologists, section 2.1.1: Pedestrian Survey and 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 33.15 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 97% of the ploughed field surface was exposed and visible per Section 2.1.1, Standards 1-6 (MTC 2011). All work was photo-documented.

Through the course of the pedestrian survey, no archaeological resources were encountered.

2.3 TEST PIT SURVEY

Approximately 2.78 ha of the study area was lawn and wooded area that cannot be strip ploughed 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, five (5) test pits produced a total of 34 Post-contact artifacts. However, this was not enough to determine if a Stage 3 Site-Specific Assessment would be necessary. Therefore, test pit excavation was continued on the survey grid, but no further archaeological resources were encountered. Consequently, an intensified test pit survey consisting of 8 radial test pits at an interval of 2.5m around the positive test pit(s) was conducted. A total of 18 additional positive radial test pits were encountered which produced 69 Post-contact artifacts. It was determined after the radial test pits were dug that the site contained further CHVI and would be recommended for further work, therefore a 1m by 1m intensification unit was not dug. All artifacts were collected according to their associated test pit.

Approximately 7% of the study area consisted of lawn area that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 86% of the study area was ploughed field that was pedestrian surveyed at an interval of 5 metres between individual transects. Approximately 8% of the study area was not assessable due to the presence of existing structures and disturbed gravel and asphalt driveways. Maps 5 & 6 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, one (1) Post-contact site, named 24-656H1 (AkHc-30), was encountered. The number and types of artifacts collected from the 24-656H1 (AkHc-30) site are listed below in Tables 3-8. Descriptions of the artifact types collected from the 24-656H1 (AkHc-30) Site can be found below in section 3.2 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.

3.2 24-656H1 (AKHC-30) SITE

The 24-656H1 (AkHc-30) site is a Post-Contact site of Euro-Canadian origins that consists of 103 artifacts covering an area approximately 20 metres from north to south and 16 metres from west to east. The number and types of artifacts collected from the 24-656H1 (AkHc-30) site are listed below in Table 3. Descriptions of these artifact types can be found appended to this report in Appendix B.

TABLE 3 24-656H1 (AKHC-30) SITE ARTIFACT COUNTS AND TYPES

MATERIAL	FREQUENCY	PERCENTAGE
Ceramic	66	64.08%
Faunal	1	0.97%
Glass	17	16.50%
Metal	19	18.45%
Total	103	100.00%

Ceramic (64.08%) constitutes the largest portion of the artifact types collected from the 24-656H1 (AkHc-30) site, followed by metal (18.45%) and glass (16.50%). Faunal remains (>1%) make up a very small percentage of the assemblage. Table 4 below describes the classes of ceramic in the artifact assemblage.

TABLE 4 24-656H1 (AKHC-30) SITE CERAMIC ARTIFACT COUNTS AND CLASS

CLASS	FREQUENCY	PERCENTAGE
Coarse Red Earthenware	32	48.48%
Porcelain	1	1.52%
Refined White Earthenware	32	48.48%
Yellowware	1	1.52%
Total	66	21.68%

Coarse Red Earthenware (48.48%) and refined white earthenware (48.48%) constitute the majority of the ceramic collected from the 24-656H1 (AkHc-30) site. Porcelain (1.52%) and yellowware (1.52%) make up a relatively small percentage of the assemblage. Table 5 below breaks the ceramic artifacts down further by type.

TABLE 5 24-656H1 (AKHC-30) SITE CERAMIC ARTIFACT COUNTS AND TYPE

TYPE	FREQUENCY	PERCENTAGE
Hand Painted	3	4.55%
Overglaze Painted	1	1.52%
Scalloped Impressed Edgeware	1	1.52%
Solid Colour Slip	1	1.52%
Transfer Print	7	10.61%
Undecorated	53	80.30%
Total	66	100.00%

Undecorated (80.30%) constitutes the majority of the ceramic collected from the 24-656H1 (AkHc-30) site. Transfer Print (10.61%) is the second most common ceramic type collected. The remaining ceramic types include hand painted (4.55%), overglaze painted (1.52%), scalloped impressed edgeware (1.52%), and solid colour slip (1.52%). Table 6 below described the various attributes noted within the ceramic collection.

TABLE 6 24-656H1 (AKHC-30) SITE CERAMIC ARTIFACT COUNTS AND ATTRIBUTE

ATTRIBUTE	FREQUENCY	PERCENTAGE
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Black	1	1.52%
Black Glaze	1	1.52%
Blue	7	10.61%
Brown	1	1.52%
Clear Glaze	20	30.30%
Cobalt Blue	1	1.52%
Lead Glaze	6	9.09%
Lead with Alumina Glaze	2	3.03%
Light Blue	1	1.52%
Orange	1	1.52%
Pink	1	1.52%
Unglazed	24	36.36%
Total	66	100.00%

Unglazed (36.26%) and clear glazed (30.30%) ceramics dominate the ceramic assemblage from the 24-656H1 (AkHc-30) site. The remaining materials, including black decoration (1.52%), black glaze (1.52%), blue decoration (10.61%), brown decoration (1.52%), cobalt blue decoration (1.52%), lead glaze (9.09%), lead with alumina glaze (3.03%), light blue decoration (1.52%), orange decoration (1.52%), and pink decoration (1.52%), make up a smaller portion. The following is the breakdown of the glass classes collected from the 24-656H1 (AkHc-30) site.

TABLE 7 24-656H1 (AKHC-30) SITE GLASS ARTIFACT COUNTS AND CLASS

CLASS	FREQUENCY	PERCENTAGE
Cylindrical	2	11.76%
Rolled Sheet	15	88.24%
Total	17	100.00%

The majority of the glass collected from the 24-656H1 (AkHc-30) site were rolled sheet (window pane), making up 88.24% of the glass assemblage. The remainder of the glass consists of cylindrical (bottle) glass. Lastly, Table 7 below breaks down the different forms of metal collected from the 24-646H1 (AkHc-30) Site.

TABLE 8 24-656H1 (AKHC-30) SITE METAL ARTIFACT COUNTS AND FORM

CLASS	FREQUENCY	PERCENTAGE
Indeterminate	3	15.79%
Nail - Cut	16	84.21%
Total	19	100.00%

The majority of the metal collected from the 24-656H1 (AkHc-30) site consists of cut nails (84.21%). The remaining metal are indeterminate pieces.

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 150 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 1km 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 approximately 120 metres north of an unnamed water course, which is a secondary water source. The study area is situated within 100m of an early settlement road that appears on the historic atlas maps of 1861 and 1877. This historic road corresponds to the road presently known as St. David Street North, which is directly adjacent to the study area on its western edge.

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 two farm complexes. The farm complex in the northern portion of the study area consists a house, a garage, a barn, two silos, a shed, and an outbuilding. The

farm complex in the southern portion of the study area consists of a house, a barn, a silo, a shed, and three outbuildings.

4.1.3 SUMMARY OF ARCHAEOLOGICAL POTENTIAL

Table 9 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, and the location of early historic settlement roads adjacent to the study area.

TABLE 9 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 within proximity (lakeshore, river, large creek, etc.)		N		If Yes, potential determined
2b Secondary water source within proximity (stream, spring, marsh, swamp, etc.)	Y			If Yes, potential determined
2c Past water source within proximity (beach ridge, river bed, relic creek, etc.)		N		If Yes, potential determined
2d Accessible or Inaccessible shoreline within proximity (high bluffs, marsh, swamp, sand bar, etc.)		N		If Yes, potential determined
3 Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		N		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 within proximity		N		If Yes, and Yes for any of 3-6, 8-9, potential determined
8 Historic Transportation route within proximity (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 2 Property Assessment, one (1) historic site, the 24-656H1 (AkHc-30) Site was encountered.

The 24-656H1 (AkHc-30) Site is a Post-Contact site of Euro-Canadian origins that consists of 103 artifacts from 23 positive test pits covering an area approximately 20 metres from north to south and 16 metres from west to east. The Post-contact portion of the site mainly consists of ceramic artifacts with the most prevalent being refined white earthenware and coarse red earthenware, followed by yellowware and porcelain. Other materials recovered include glass (window and bottle shards) and metal (cut nails). The 24-656H1 (AkHc-30) Site assemblage dates primarily between the second quarter and last quarter of the nineteenth century, with the most likely date range from 1839-1890.

The 24-656H1 (AkHc-30) Site contains at least 20 artifacts that date before 1900. Consequently, the site retains CHVI and a Stage 3 Site-Specific Assessment is recommended.

5.0 RECOMMENDATIONS

5.1 STAGE 1-2 RECOMMENDATIONS

As a result of the property Assessment of the study area, one historic site, the 24-656H1 (AkHc-30) Site, was identified. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the 24-656H1 (AkHc-30) Site has not been completely documented. There is potential for further CHVI for this location. The 24-656H1 (AkHc-30) Site 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 24-656H1 (AkHc-30) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 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. 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 at the corporate office of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario MCM (MCM) on behalf of the government and citizens of Ontario.*

3. *The Stage 3 Site-specific Assessment of the 24-656H1 (AkHc-30) Site must include further archival research to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*

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.*

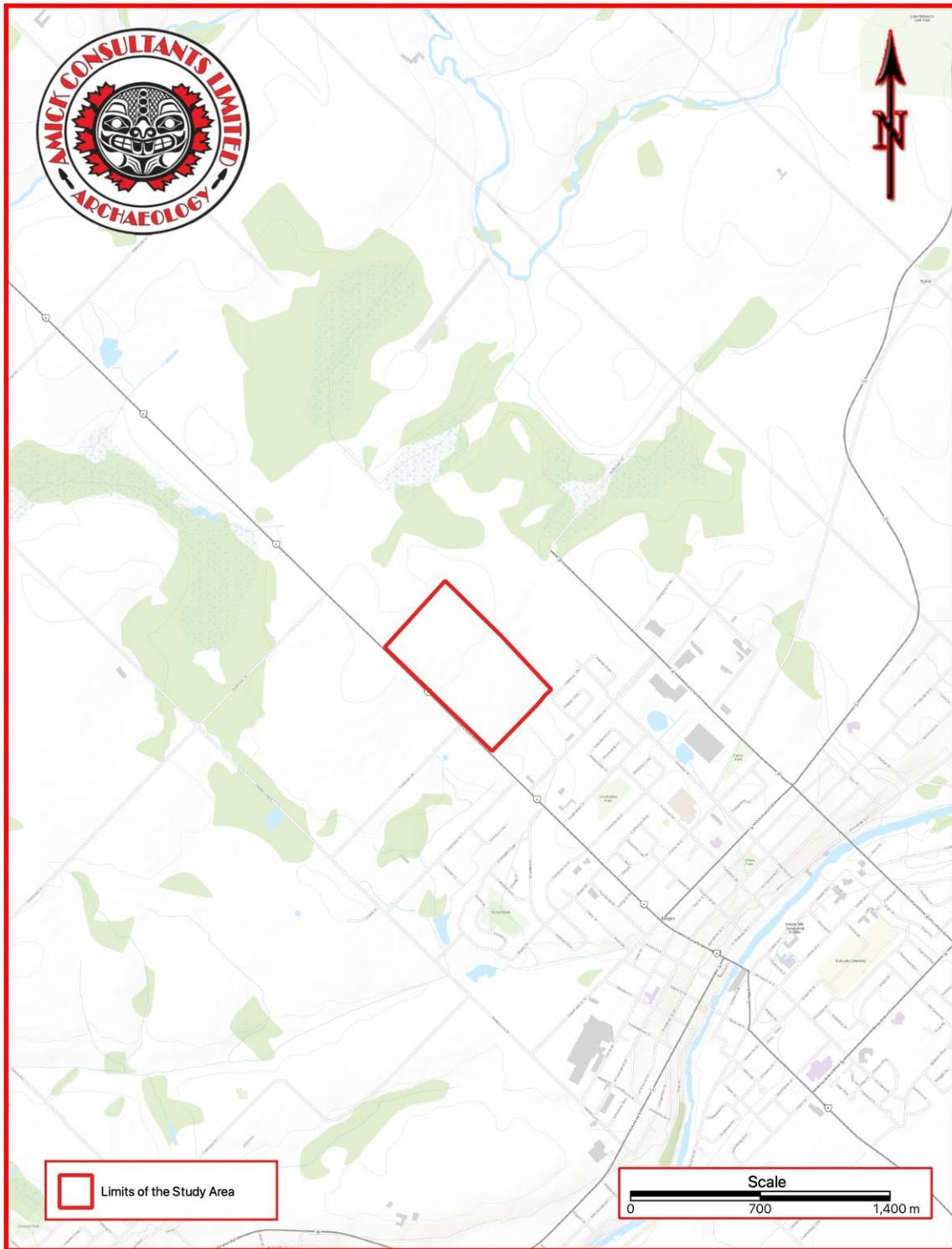
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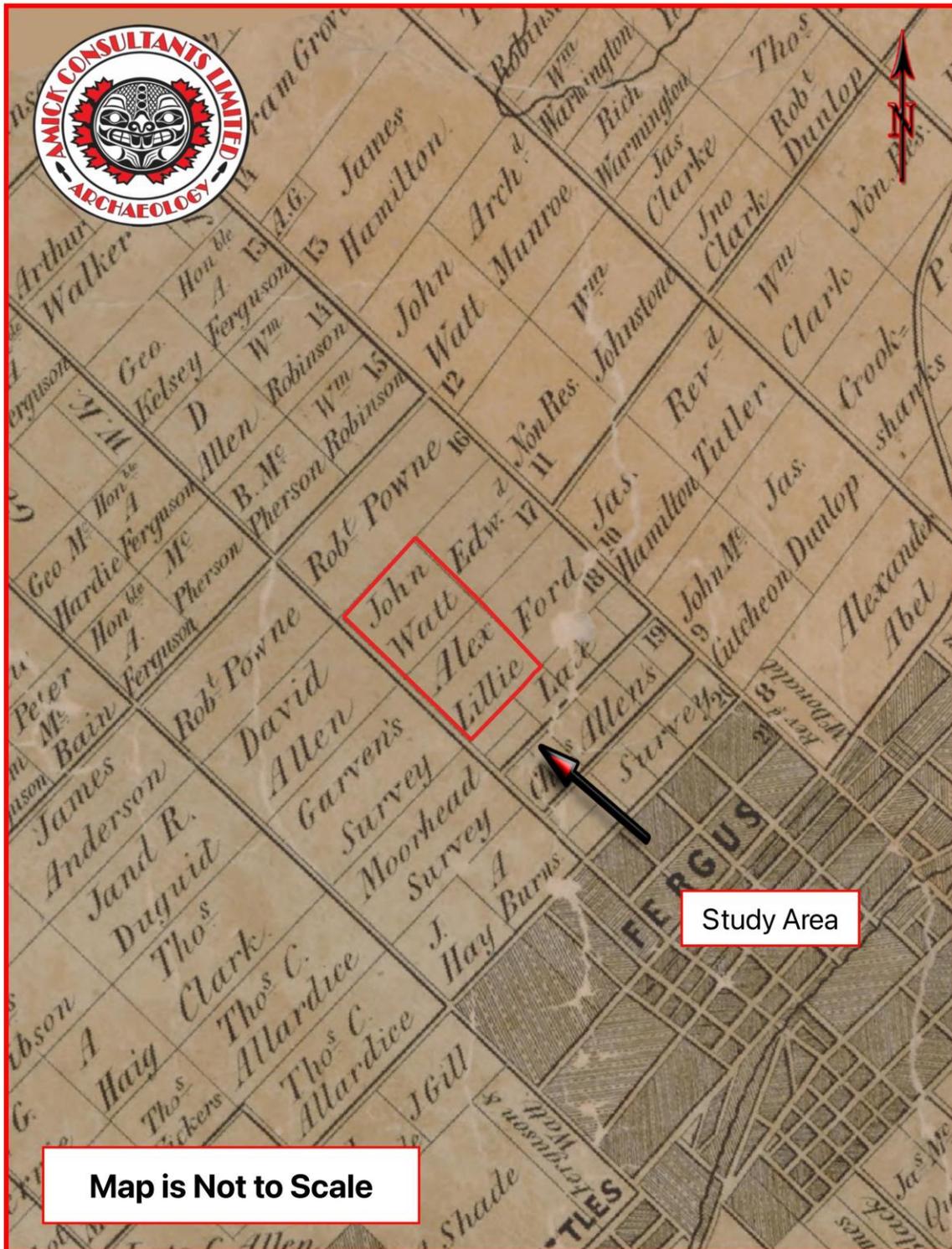
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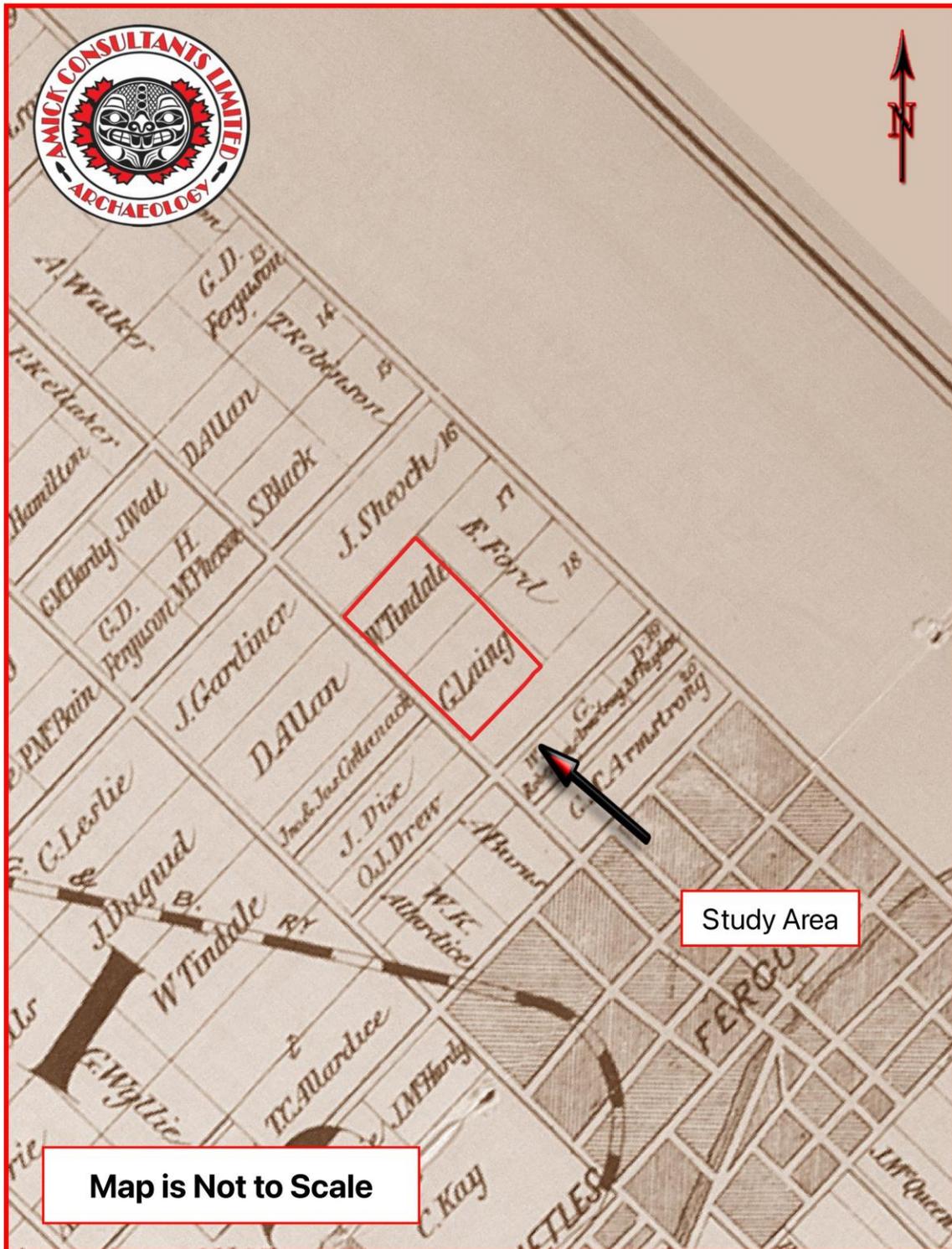
MAPS



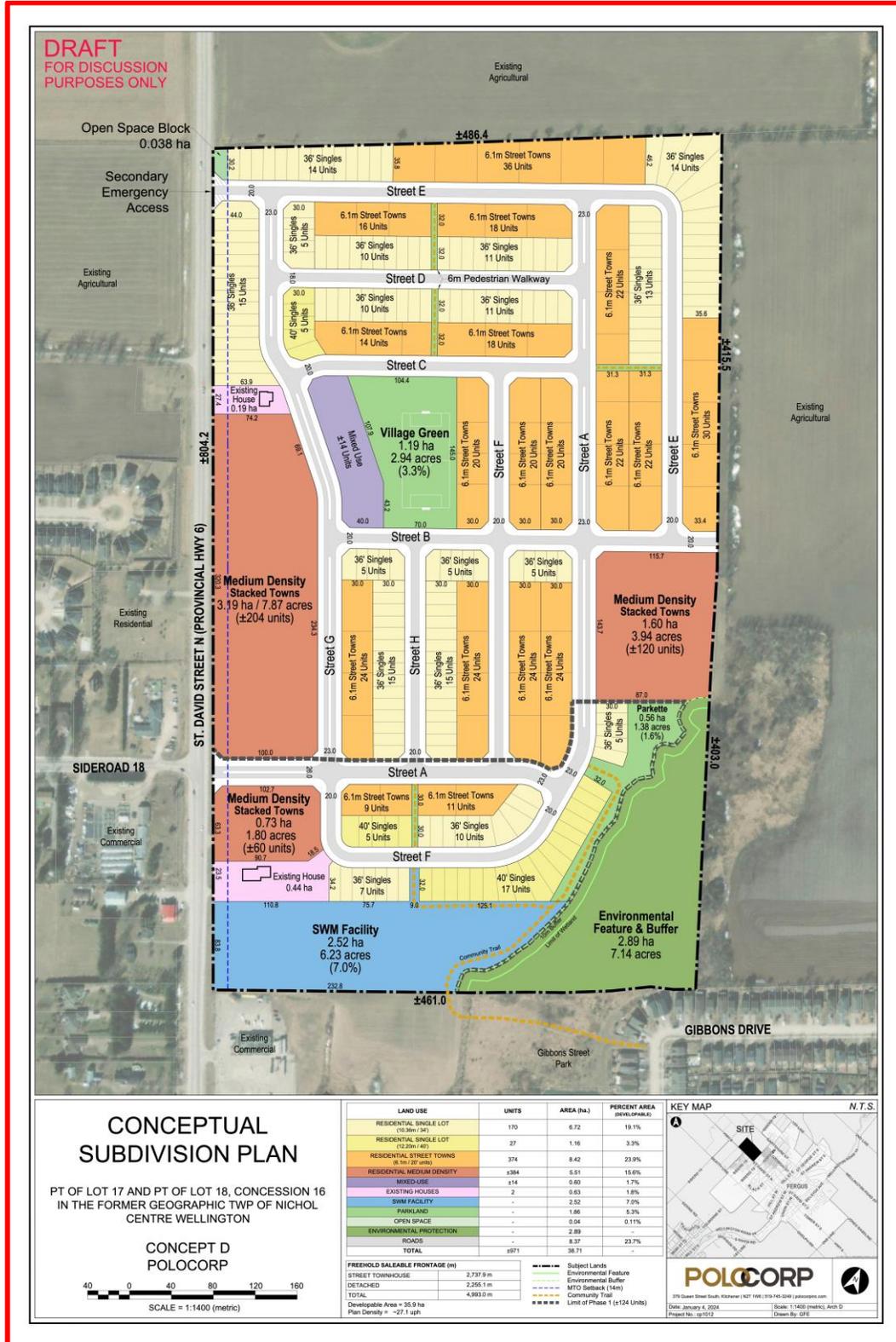
MAP 1 LOCATION OF THE STUDY AREA (ESRI 2019)



MAP 2 FACSIMILE SEGMENT OF HISTORICAL COUNTY MAP OF WELLINGTON COUNTY
(LESLIE 1861)



MAP 3 FACSIMILE SEGMENT OF THE HISTORIC ATLAS MAP OF THE TOWNSHIP OF NICHOL
(WALKER & MILES 1877)



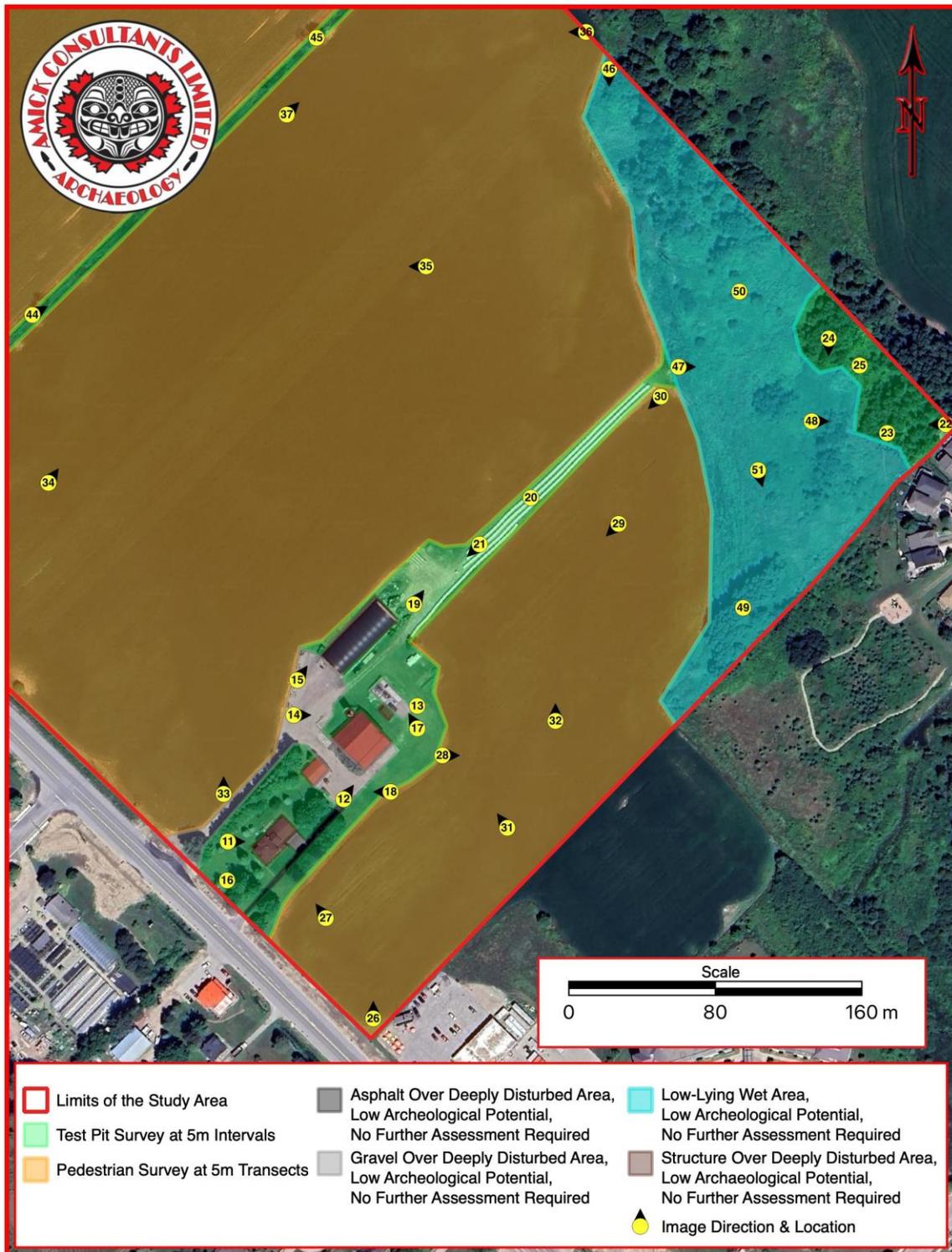
MAP 4 CONCEPTUAL SUBDIVISION PLAN (POLOCORP 2024)



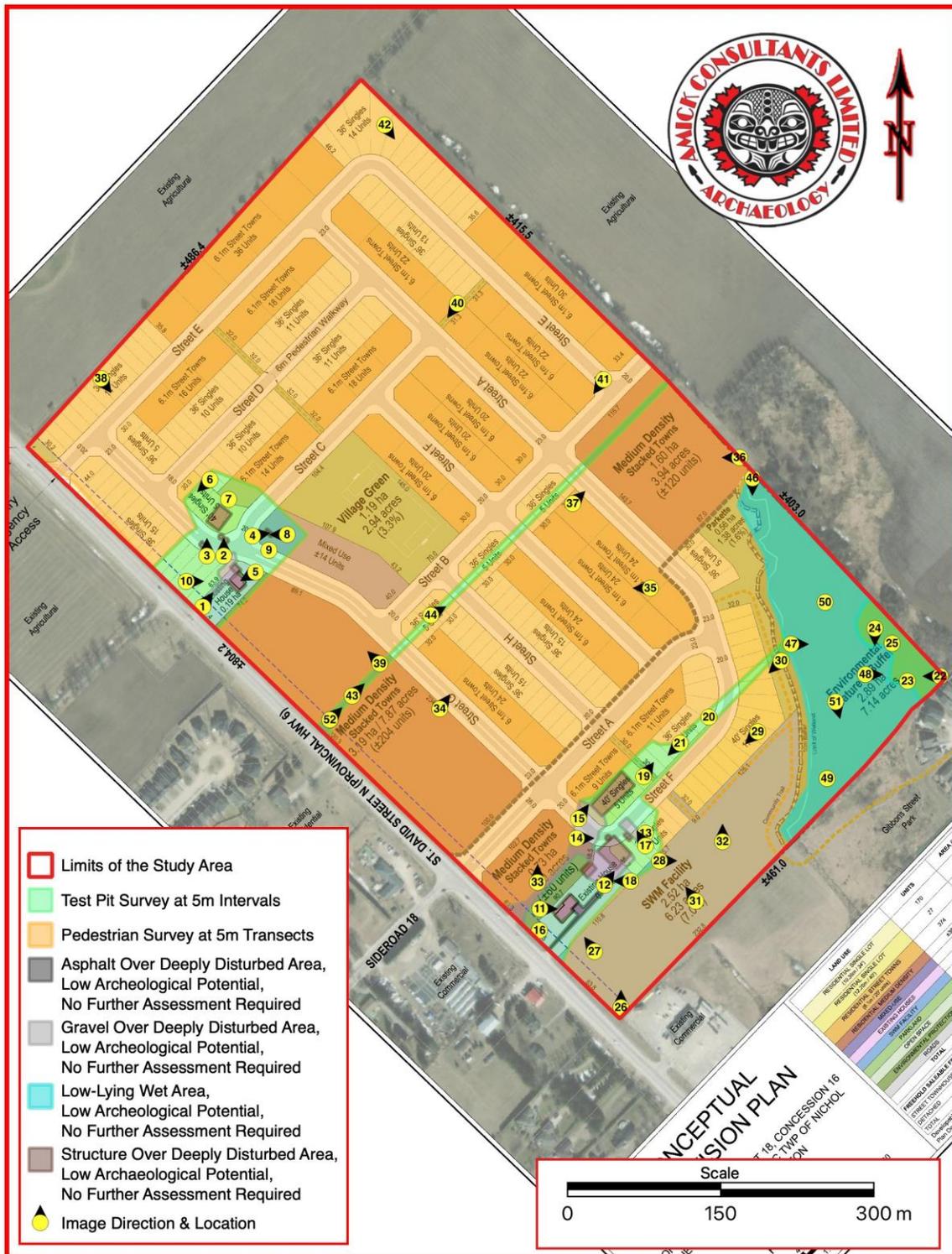
MAP 5 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2024)



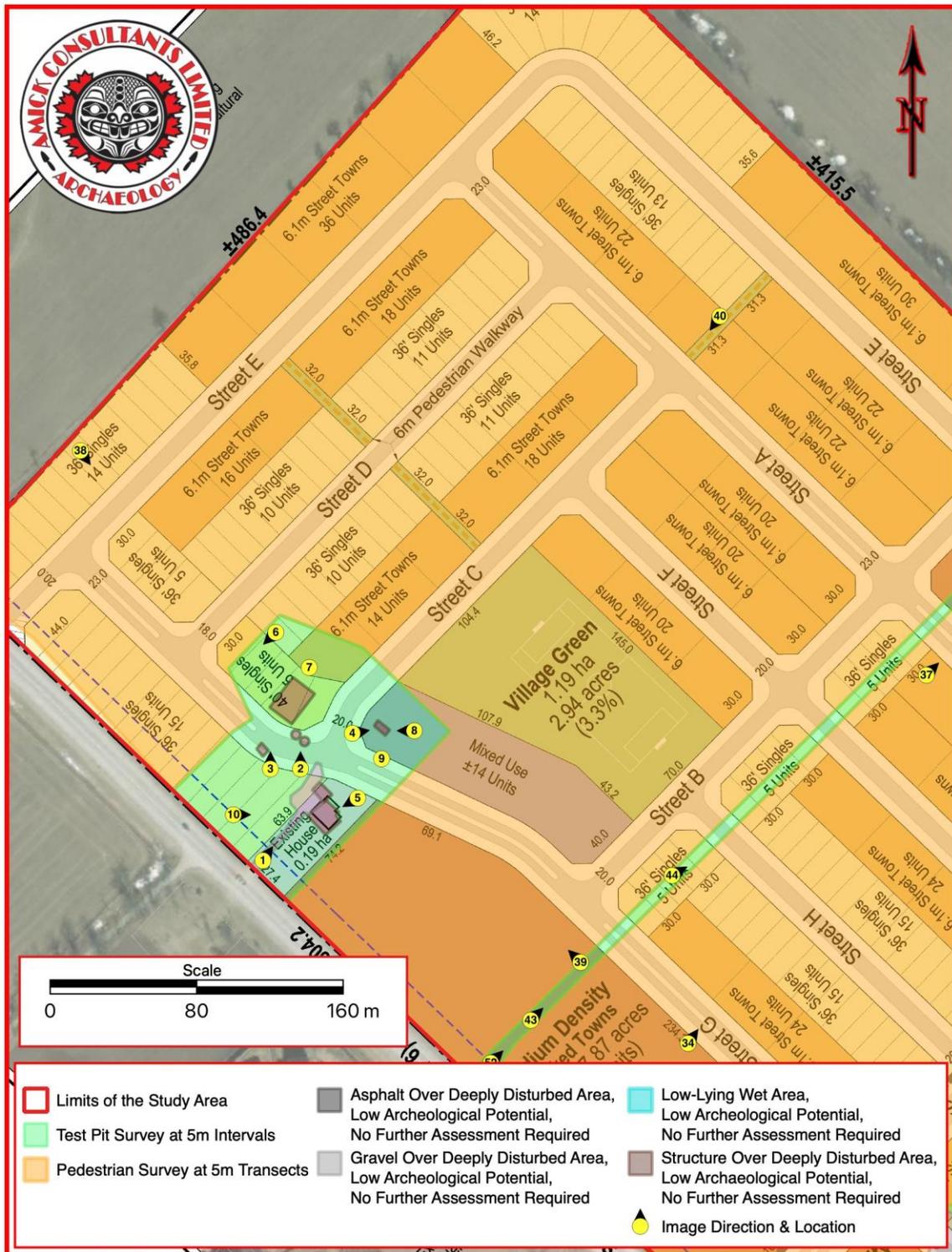
MAP 5.1 AERIAL PHOTO OF NORTHERN SECTION OF THE STUDY AREA (GOOGLE EARTH 2024)



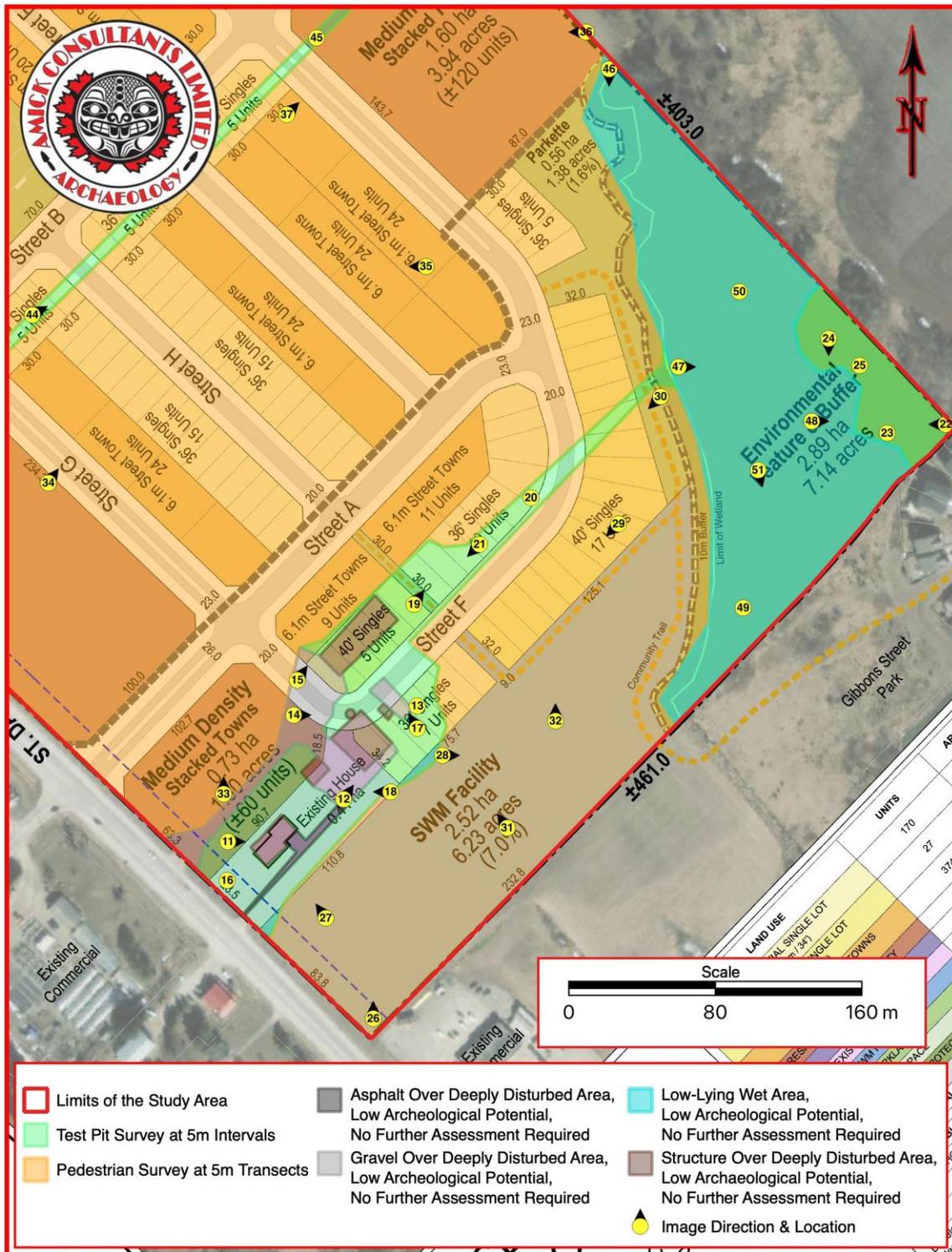
MAP 5.2 AERIAL PHOTO OF THE SOUTHERN SECTION OF THE STUDY AREA (GOOGLE EARTH 2024)

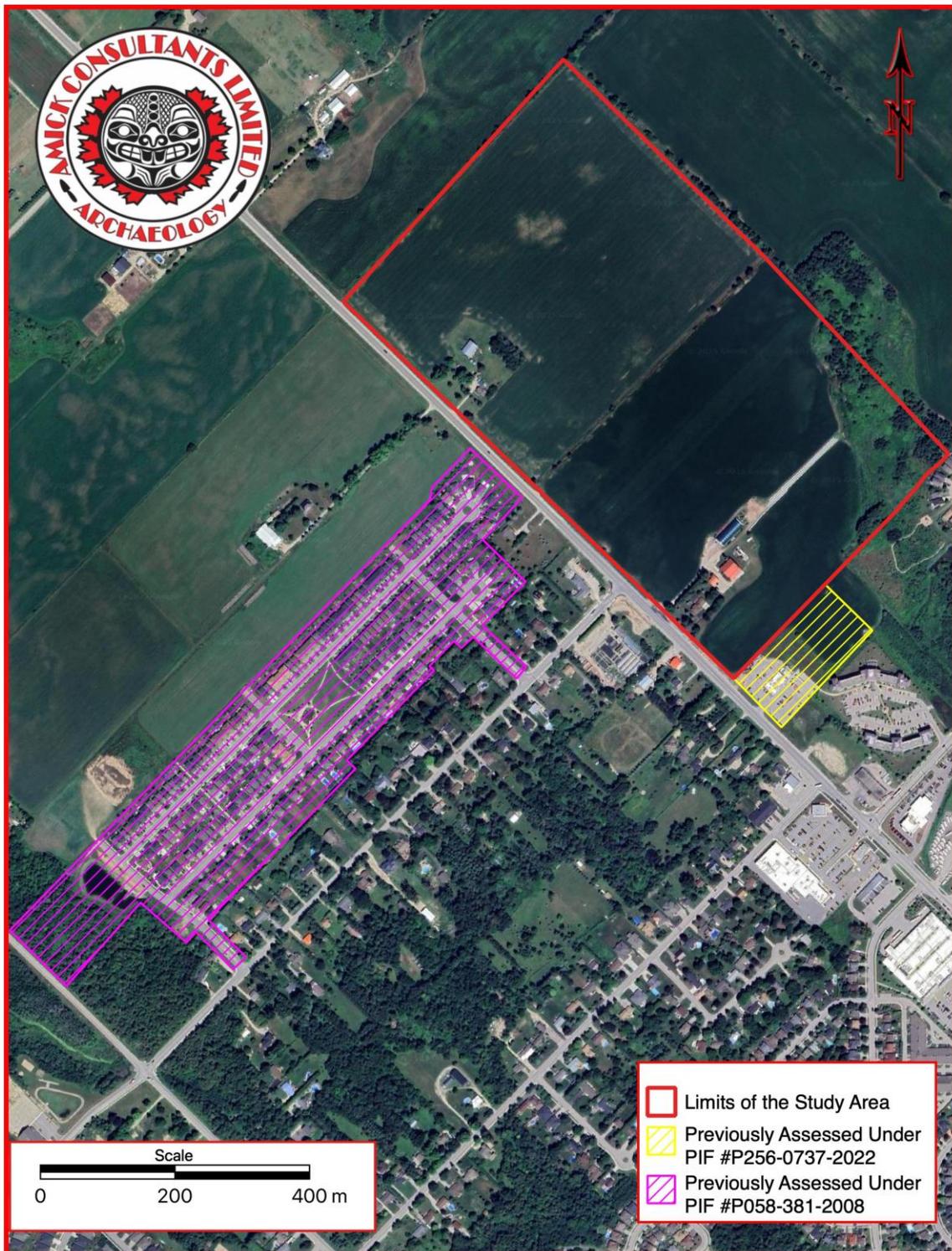


MAP 6 DETAILED PLAN OF THE STUDY AREA (AFTER POLOCORP 2024)

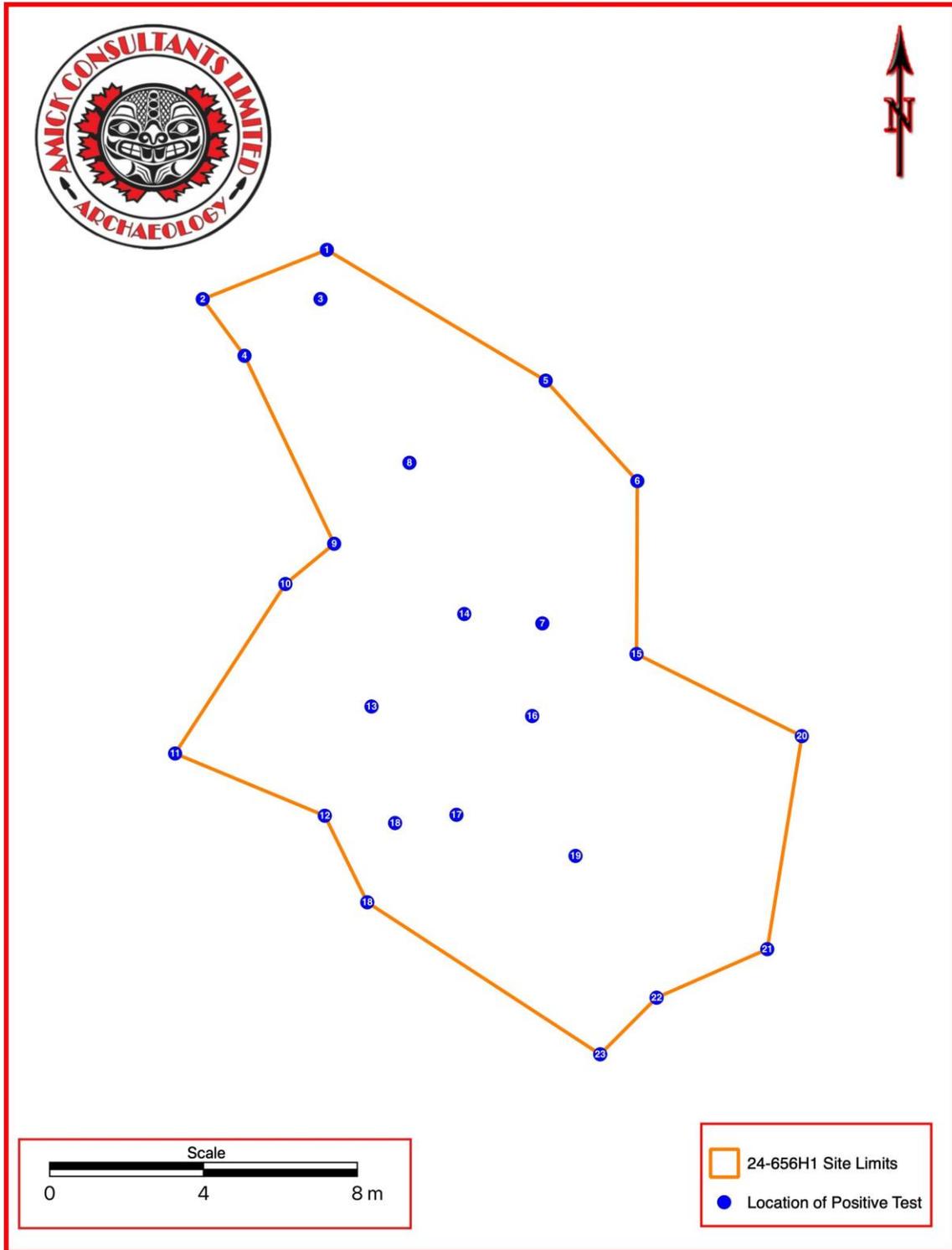


MAP 6.1 DETAILED PLAN OF THE NORTHERN SECTION OF THE STUDY AREA (AFTER POLOCORP 2024)





MAP 7 AERIAL MAP DEMONSTRATING PREVIOUS ARCHAEOLOGICAL ASSESSMENTS CONDUCTED WITHIN 50M OF THE CURRENT STUDY AREA (GOOGLE EARTH 2024)



MAP 8 24-656H1 (AKHC-30)

IMAGES



IMAGE 1 GRAVEL DRIVE AND TEST PIT SURVEY CONDITIONS



IMAGE 2 BARN, SILOS, AND TEST PIT SURVEY CONDITIONS



IMAGE 3 BARN AND SHED



IMAGE 4 OUTBUILDING



IMAGE 5 HOUSE



IMAGE 6 CREW CONDUCTING TEST PIT SURVEY



IMAGE 7 COMPLETED TEST PIT



IMAGE 8 CREW CONDUCTING TEST PIT SURVEY



IMAGE 9 COMPLETED TEST PIT



IMAGE 10 CREW CONDUCTING TEST PIT SURVEY



IMAGE 11 HOUSE



IMAGE 12 BARN AND GRAVEL SURFACE



IMAGE 13 COMPACTED GRAVEL TEST PIT



IMAGE 14 BARN AND SILO



IMAGE 15 OUTBUILDING AND GRAVEL SURFACE



IMAGE 16 COMPLETED TEST PIT



IMAGE 17 SHED AND GRAVEL SURFACE



IMAGE 18 CREW CONDUCTING TEST PIT SURVEY



IMAGE 19 CREW CONDUCTING TEST PIT SURVEY



IMAGE 20 COMPLETED TEST PIT



IMAGE 21 CREW CONDUCTING TEST PIT SURVEY



IMAGE 22 TEST PIT SURVEY CONDITIONS



IMAGE 23 COMPLETED TEST PIT



IMAGE 24 CREW CONDUCTING TEST PIT SURVEY



IMAGE 25 COMPLETED TEST PIT



IMAGE 26 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 27 CREW CONDUCTING PEDESTRIAN SURVEY



IMAGE 28 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 29 CREW CONDUCTING PEDESTRIAN SURVEY



IMAGE 30 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 31 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 32 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 33 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 34 CREW CONDUCTING PEDESTRIAN SURVEY



IMAGE 35 CREW CONDUCTING PEDESTRIAN SURVEY



IMAGE 36 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 37 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 38 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 39 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 40 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 41 OVERVIEW OF PEDESTRIAN SURVEY CONDITIONS



IMAGE 42 CREW CONDUCTING PEDESTRIAN SURVEY



IMAGE 43 CREW CONDUCTING TEST PIT SURVEY



IMAGE 44 CREW CONDUCTING TEST PIT SURVEY



IMAGE 45 COMPLETED TEST PIT



IMAGE 46 OVERVIEW OF LOW-LYING WET AREA



IMAGE 47 OVERVIEW OF LOW-LYING WET AREA



IMAGE 48 OVERVIEW OF LOW-LYING WET AREA



IMAGE 49 WATERLOGGED TEST PIT



IMAGE 50 WATERLOGGED TEST PIT



IMAGE 51 OVERVIEW OF LOW-LYING WET AREA



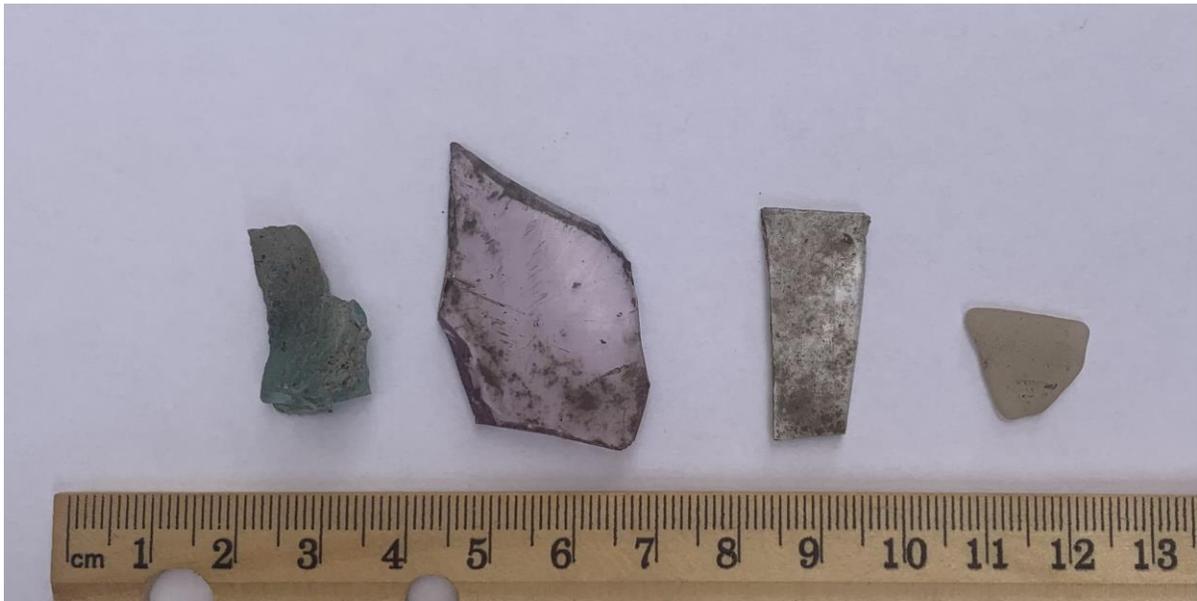
IMAGE 52 OVERVIEW OF TEST PIT SURVEY CONDITIONS



**IMAGE 52: 24-656H1 (AKHC-30) ARTIFACT SAMPLE
FROM LEFT TO RIGHT: CAT# 5, 26, 56**



**IMAGE 53: 24-656H1 (AKHC-30) ARTIFACT SAMPLE
TOP ROW FROM LEFT TO RIGHT: CAT# 36, 39, 40, 55
BOTTOM ROW FROM LEFT TO RIGHT: CAT# 41, 46, 49, 59, 61**



**IMAGE 54: 24-656H1 (AKHC-30) ARTIFACT SAMPLE
TOP ROW FROM LEFT TO RIGHT: CAT# 14, 7, 8, 52**

APPENDIX A: 24-656H1 (AKHC-30) ARTIFACT CATALOGUE

CAT #	Provenience	Layer	Material	Class	Type	Attribute	Form	Function	Qty	Date Range
1	TP 18	1	Ceramic	Refined White Earthenware	Undecorated	Unglazed	Indeterminate	Indeterminate	1	1820-Present
2	TP 18	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead Glaze	Body Sherd	Food Preparation & Consumption	2	1796-1920
3	TP 23	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
4	TP 19	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	1	1870-Present
5	TP 19	1	Metal	Iron	Cut		Nail	Architecture	1	1825-1890
6	TP 20	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	2	1870-Present
7	TP 20	1	Glass	Cylindrical	Commercial Container	Purple Solarized	Bottle Shard	Storage	1	1840-1920
8	TP 22	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	1	1870-Present
9	TP 16*	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	3	1850-Present
10	TP 21*	1	Metal	Iron	Cut		Nail	Architecture	1	1825-1890
11	TP 21*	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	5	1785-Present
12	TP 21*	1	Ceramic	Refined White Earthenware	Transfer Print	Blue	Body Sherd	Tableware	4	1830-Present
13	TP 21*	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	5	1820-Present
14	TP 21*	1	Glass	Cylindrical	Commercial Container	Melted	Bottle Shard	Storage	1	1870-Present
15	TP 18	1	Ceramic	Refined White Earthenware	Transfer Print	Blue	Rim Sherd	Tableware	1	1830-Present

16	TP 15	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	2	1785-Present
17	TP 15	1	Metal	Iron	Wire		Indeterminate	Indeterminate	1	Indeterminate
18	TP 15	1	Metal	Iron	Cut		Nail	Architecture	1	1825-1890
19	TP 17	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	1	1785-Present
20	TP 17	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	1	1820-Present
21	TP 14	1	Metal	Iron	Cut		Nail	Architecture	1	1825-Present
22	TP 13	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	6	1820-Present
23	TP 13	1	Ceramic	Refined White Earthenware	Hand Painted	Pink	Rim Sherd	Tableware	1	1830-1870
24	TP 13	1	Faunal	Mammal	Fragment		Bone	Indeterminate	1	Indeterminate
25	TP 13	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	1	1785-Present
26	TP 13	1	Metal	Iron	Cut		Nail	Architecture	4	1825-1890
27	TP 13	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	1	1870-Present
28	TP 13	1	Glass	Rolled Sheet	Indeterminate	Opaque Blue	Indeterminate	Indeterminate	1	Indeterminate
29	TP 12	1	Metal	Iron	Cut		Nail	Architecture	1	1825-1890
30	TP 12	1	Ceramic	Refined White Earthenware	Hand Painted	Blue	Body Sherd	Tableware	1	1830-1870
31	TP 12	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	1	1785-Present
32	TP 9*	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	4	1785-Present
33	TP 9*	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	3	1870-Present
34	TP 9*	1	Ceramic	Refined White Earthenware	Hand Painted	Black	Body Sherd	Tableware	1	1830-1870

35	TP 10	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	3	1820-Present
36	TP 10	1	Ceramic	Coarse Red Earthenware	Undecorated	Black Glaze	Body Sherd	Food Preparation & Consumption	1	1796-1920
37	TP 10	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	1	1870-Present
38	TP 10	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead Glaze	Body Sherd	Food Preparation & Consumption	2	1796-1920
39	TP 10	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead with Alumina Glaze	Body Sherd	Food Preparation & Consumption	1	1840-1900
40	TP 10	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
41	TP 10	1	Ceramic	Refined White Earthenware	Scalloped Impressed Edgeware	Cobalt Blue	Rm Sherd	Tableware	1	1840-1870
42	TP 10	1	Ceramic	Refined White Earthenware	Transfer Print	Brown	Body Sherd	Tableware	1	1830-Present
43	TP 10	1	Ceramic	Refined White Earthenware	Solid Colour Slip	Light Blue	Body Sherd	Tableware	1	1800-1920
44	TP 8	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	1	1820-Present
45	TP 8	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	3	1870-Present
46	TP 7	1	Ceramic	Refined White Earthenware	Transfer Print	Blue	Body Sherd	Tableware	1	1830-Present
47	TP 7	1	Metal	Iron	Cut		Nail	Architecture	1	1825-Present
48	TP 7	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	1	1785-Present
49	TP 1	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	2	1820-Present
50	TP 1	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead Glaze	Body Sherd	Tableware	1	1785-Present
51	TP 1	1	Metal	Iron	Cut		Nail	Architecture	3	1825-1890

52	TP 5	1	Glass	Rolled Sheet		Water Worn	Indeterminate	Indeterminate	1	Indeterminate
53	TP 4	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead with Alumina Glaze	Brick Fragment	Architecture	1	1840-1900
54	TP 4	1	Ceramic	Coarse Red Earthenware	Undecorated	Lead Glaze	Body Sherd	Food Preparation & Consumption	1	1796-1920
55	TP 2*	1	Ceramic	Yellowware	Undecorated	Clear Glaze	Body Sherd	Tableware	1	1830-1930
56	TP 2*	1	Metal	Iron		Slag	Indeterminate	Indeterminate	2	Indeterminate
57	TP 2*	1	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Brick Fragment	Architecture	3	1785-Present
58	TP 11*	1	Ceramic	Refined White Earthenware	Undecorated	Clear Glaze	Body Sherd	Tableware	1	1820-Present
59	TP 6	1	Glass	Rolled Sheet	Window	Clarified	Window Pane	Architecture	1	1870-Present
60	TP 3	1	Metal	Iron	Cut		Nail	Architecture	3	1825-1890
61	TP 3	1	Ceramic	Porcelain	Overglaze Painted	Orange	Rim Sherd	Tableware	1	1890-Present

* indicates a test pit encountered on the original 5 metre test pit survey grid.

APPENDIX B: DATABLE POST-CONTACT ARTIFACT TYPE DESCRIPTIONS

The descriptions offered below are confined to datable historic artifacts typically recovered during field investigations. Although other materials are often found, they do not necessarily lend themselves to dating archaeological assemblages and are therefore not included in the following discussion. Additionally, the following represents a comprehensive reference guide for datable objects and is not limited to finds specific to a particular project or site assemblage.

CERAMICS

Creamware

Cream coloured earthenware was developed during the early 18th Century in England. It's development is attributed to Thomas Astbury of Shelton England during the reign of George I (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). In the early period the lead glaze of this ware was applied in powdered form known as smithum or galena. Creamware achieved widespread production and general popularity as tableware by about 1750 as a result of Thomas Frye's development of a new process of applying the glaze in liquid form. This allowed for consistent and even application of decorative finishes and was quickly copied by other potters (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in 1762. It is said that the Queen was so impressed by this ware that she ordered a table service of the same ware but modified the design to her own taste. The resulting pattern became known as "Queen's Ware". When this set was delivered, George III saw it and likewise placed an order for an additional set altered to suit his own tastes. This further modification became known as the "Royal Pattern". As a result of these regal commissions, creamware achieved immense popularity (Hughes n.d.: 108).

By the late 1790s Creamware became the cheapest tableware in production. This was due to a number of factors, but it was mainly due to the introduction of pearlware which was whiter and more closely resembled oriental porcelain. This new ware quickly displaced Creamware as the most popular of the tableware produced during the late 18th and early 19th Centuries. By 1830 truly white (refined white earthenware) tableware was available. Creamware, known from about 1790 as "CC Ware", had changed as well. Officially "CC Ware" remained in production throughout the 19th Century but it became indistinguishable from refined white earthenware by about 1830.

Plain Creamware

Plain creamware was in production throughout the production history of the ware; however it is uncommon prior to 1790.

Pearlware

Pearlware was the next stage after creamware in the quest for a white ceramic body. For many years the development of pearlware was attributed to Josiah Wedgwood, who, after many experiments introduced a ceramic which he termed “pearl white” in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed “china glaze”, may have been in production sometime in the 1760s and certainly by 1775 (for a detailed discussion see Miller 1987).

Pearlware is essentially a variation of creamware. The body of the ware is essentially the same with slightly higher flint content, but the real difference is in the glaze. Cobalt was added to the glaze of this ceramic as a bluing agent to make the off-white colour of the glaze appear whiter. This ceramic was called “pearl white and “china glaze” amongst other things, but is now more commonly identified as pearlware.

Plain Pearlware

Plain undecorated pearlware fragments can be dated within the general production range of the ware itself, 1770 – 1830.

Polychrome Hand Painted Pearlware

Polychrome painted pearlware is simply pearlware which has been hand painted with more than one colour. There has been some attempt to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be produced using other oxides which have a longer history of use in ceramic production. The essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

Relief Moulded Pearlware

This decorative technique is most commonly identified with ironstone. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone, such as pearlware, incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

Slip Decorated Pearlware

This type of decoration is made by applying slip in patterns to the exterior surface of vessels. This type of decoration was used on ceramics both before and after the production of pearlware and is therefore not useful in refining a date from that of general pearlware production.

Transfer Printed Pearlware

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18th Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

Shell Edge Decorated Pearlware

Shell edge came into production on creamware during the 1770s. It remained a status item of the middle and upper classes until the close of the century. Following the War of 1812, transfer printed wares began to rise very quickly in popularity and edged wares quickly became the cheapest of the decorated wares in the 19th Century. Edged wares remained in production on refined white earthenware long after pearlware ceased to be produced as a table ware around 1830 (Miller 1990: 115).

Refined Red Earthenware

Similar to refined white earthenware, refined red earthenware (RRE) is a semi-vitreous refined earthenware with a red clay paste rather than a white clay paste (Ricardi, 2020: 103). Fired at temperatures of 1100-1200° C, RRE is often clear, lead-glazed, hard and compact; it is only slightly porous and the compaction texture may be visible (Groover, 2003: 231-233).

Refined White Earthenware

The various forms of refined white earthenware which came into production during the 1820s remained in production for an extended period of time and do not lend themselves well to dating unless one has the advantage of makers' marks. In the case of this site there is not one example of refined white earthenware which has a maker's mark. This is not surprising since the ceramics from this ware category recovered from this site represent the cheapest types produced. The cheapest goods were often not marked since it was not considered worth the time and material.

Refined white earthenware (or RWE) was one of the most popular mid-nineteenth century ceramic wares in Ontario. Decorated motifs identified include: factory-slipped annular ware and banded (ca. 1830-1920), scalloped blue edgeware (ca. 1830-1850), flow blue (ca. 1840-1860), hand-painted late palette (ca. 1830-1870s), Rockingham (ca. 1855-1890s), spongeware (ca. 1840-1870), blue (1820 to present), black (ca. 1830-1840s), brown (ca. 1830-1860; 1880s) green and red/pink transferprint (1830-1850). Spongeware motifs were common between ca. 1840-1870, while transferprint ranges in date from ca. 1820 to the present.

The highest frequency of decoration noted are the various transferprints (n=369). Annularware or banded ceramics are the next highest in frequency (n=62), followed by late palette hand painted (n=50), blue flowware (n=34), spongeware (n=14) and scalloped edgeware (n=9).

Plain Refined White Earthenware

Lacking any definitive attributes, these sherds have been assigned a date of post 1825.

Polychrome Hand Painted Refined White Earthenware

Polychrome painted refined white earthenware is simply refined white earthenware which has been hand painted with more than one colour. There have been some attempts to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and from thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the

firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be produced using other oxides which have a longer history of use in ceramic production. The essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

Slip Decorated Refined White Earthenware

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Sponge Decorated Refined White Earthenware

This decorative style is produced by applying pigment to the surface of vessels using sponges. This type of decoration enjoyed tremendous popularity during the middle of the 19th Century. Blue was the first colour used for this purpose and was most prevalent during the 1840s. Sponged wares were shipped to North America in quantity as cheap decorative kitchen and toiletry articles by mainly Scottish potteries until about 1890 (Collard 1984: 144-145).

Transfer Printed Refined White Earthenware

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18th Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

Ironstone

Ironstone is partially vitrified white earthenware. Plain ironstone was first produced in the 1840s and featured no decorative elements apart from ribs, scrolls, or panels which were an intrinsic part of the vessel design. Various designs in relief moulded decoration were patterned from 1848 onward. One pattern, known generally as the “wheat” Pattern has remained in production in various styles from 1848 up to the present day (Sussman 1985: 7). Ironstone is first mentioned on Ontario store records in 1847 (Kenyon 1988: 25). This ware gained popularity throughout the second half of the nineteenth century until by the 1880s it far outsold other ceramic types (Kenyon 1988: 20).

Ironstone was manufactured specifically for the North American market. In general, those potteries which produced this ceramic did so to the exclusion of all others (Sussman 1985: 8). During its early history, throughout the 1850s and early 1860s, ironstone was evidently as expensive as the costly transfer printed wares (Sussman 1985: 9). This ware was being advertised in London (Ontario) newspapers by the early 1860s and by the 1870s was one of the most popular ceramics available on the market (Kenyon n.d.: 11). By 1897 it was the cheapest ceramic sold by the T. Eaton Company. Prices charged for either plain or relief decorated ironstone were the same (Sussman 1985: 9).

Plain Ironstone

These pieces are not precisely datable and were most likely produced some time after 1840. Ironstone and a number of related vitrified and semi-vitrified wares were produced in great quantities during the second half of the 19th Century and into the 20th Century. These ceramics were a continuation of the development techniques and styles employed in the production of other earlier contemporary wares.

Relief Moulded Ironstone

The most common decorative technique identified with ironstone is relief moulding. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

Slip Decorated Ironstone

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Sponge Decorated Ironstone

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Transfer Printed Ironstone

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the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118). The decorative technique of transfer printing on ironstone has no effect on the general date range of this type of ware as it was applied to ironstone throughout the history of the production of this ceramic type.

Soft Paste Porcelain

Porcelain was first produced in Europe at Meissen by the firm “Royal Saxon Porcelain Manufacture” in 1710, although it had been developed by Johann Friedrich Bottger two years previously in 1708 (Savage 1954:125). This development reflects the high regard Europeans had held for porcelain imported from China and Japan. Loved for their beauty and durability, European ceramic producers lost considerable revenue to this import and were determined to discover a means of duplicating the ware. In England the discovery of a formula for porcelain production was not achieved until probably 1743 when the “Chelsea” works went into production. A patent for soft paste porcelain was made the following year in the joint names of Edward Heylyn and Thomas Frye (Savage 1954: 210). Throughout the early period of European production these wares tended to be heavily ornamented with thick overglaze polychrome enamels and as processes were refined the decorative techniques of underglaze painting and transfer patterns were used extensively. These decoration techniques predominated well into the 19th Century. It was not until the late 19th Century, and particularly, the 20th Century that porcelain became accessible as a standard household ware. By this time its decorative characteristics were substantially debased, with plain porcelain becoming increasingly common.

Soft paste porcelain is the lowest grade of this ware, and is different from the more costly hard paste porcelain in a number of ways. First, soft paste porcelain generally exhibits a greyish cast, whereas hard paste porcelain or true porcelain is white. When broken soft paste porcelain has a granular paste in appearance and a glassy glaze which is visibly distinct from the body. Hard paste is entirely glassy in cross section and it is very difficult to assess where the body ends and the glaze begins. High firing in this case ensures a more complete fusion of body and glaze which accounts for the difference in appearance of these two wares.

Plain Soft Paste Porcelain

Lacking any other diagnostic datable attributes, plain sherds of this ware cannot be more precisely dated beyond the general date range of this type of ceramic.

Semi-Porcelains:

A total of 36 semi-porcelain ceramic fragments was recovered during the assessment. Semi-porcelain was known outside of Canada as a hard-paste porcelain produced in England and continental Europe during the late nineteenth and twentieth centuries. The clay is fired to a hard-paste consistency so that it has a fine-grained, dense, and hard body. It is extremely

white in colour and the clear glaze has a high firing point which creates a glassy appearance. Semi-porcelain can be produced in moulded forms or have sprig moulding attached, as well as have transfer print and hand-painted motifs. In the twentieth century, semi-porcelain was exclusively decorated with overglaze decalcomania patterns and liquid gold embellishment (DAACS 2013).

DAACS (2013). Digital Archaeological Archive of Comparative Slavery Cataloging Manual: Ceramics. October 2003, updated October 2013.

Stoneware

Stoneware is a class of ceramic which belongs under the larger heading of vitrified wares. Stoneware is manufactured from different clays that that used to make earthenware. This is because the objects in this medium are fired at much higher temperatures such that the clay is brought nearly to its melting point thereby causing the body to fuse together. It renders the body of the finished product much harder and therefore more durable. It has the added effect of rendering the paste of the fired ware wholly or partially water impermeable. Stoneware has been used to produce a wide variety of goods from the most elaborate and expensive to the most robust and utilitarian of the potter's craft.

Salt Glazed Stoneware

Salt glazed stoneware was first made in England during the latter years of the 16th Century. This particular variety of stoneware is relatively cheap and easy to produce as it requires only one firing to harden the vessel and to apply the glaze. The name "salt glaze" derives from the process by which this product is manufactured. At the appropriate time during the firing of the vessels, salt is shoveled into the kiln. The heat of the kiln causes the salt to separate into its constituent elements of sodium and chloride. The chloride gas escapes through the vent holes of the kiln and the sodium bonds with the silica present in the clay of the vessels to form a glass over the surface of the vessel. The manufacture of utilitarian wares of this type has been popular from the time of its development until well into the 20th Century. Salt glazed vessels rose to prominence as larger more efficient potteries were established in North America which could produce these high firing durable products at low cost. The industrial production of utilitarian stoneware goods displaced the localized red earthenware industry in the closing decades of the 19th Century.

Bristol Glazed Stoneware

Invented by William Powell of Bristol, Bristol glaze stoneware was manufactured from circa 1835 to the mid-20th century. Initially used as an alternative to salt and lead glazes to produce a smooth, white surface on stoneware pastes, Bristol glaze became popular in North America in the 20th century (Greer 1981:265). Bristol Glaze is a feldspathic glaze-slip using zinc oxide, that requires only a single firing. It is sometimes called "double glazed ware" because the two-toned effect required dipping each vessel in the glaze two times (Noël Hume 2001:324).

Yellow Ware

Yellow ware was generally used for kitchen crockery and utility bowls. Yellow ware which is decorated with coloured horizontal bands is often referred to as “banded ware”. This is the most readily recognizable of the yellow ware products which became popular after 1840. Undecorated plain yellow ware is termed “common yellow” and dates from about 1830 onward. Yellow ware did not pass out of common usage in Canada until the 1930s (Lueger 1981: 141).

Coarse Red Earthenware

Coarse red earthenware refers to a class of ceramic which was used largely for general purpose utilitarian kitchen and household wares. It is very difficult to date with precision as this form of vessel manufacture was pursued in the main by small cottage industries supplying what was normally a local market. As a result, they appear in highly variant forms based upon the clays, glazes, and techniques of each potter. They are common on historic sites from the beginning of settlement in North America until 1900. Two of the earliest potteries to be established in Ontario both began production in 1849. Many other potteries were soon established which provided domestic and utilitarian wares to primarily local consumers.

Coarse Yellow Earthenware

Coarse yellow earthenware (CYE) refers to coarse earthenware fabricated and decorated in the same way but the mineral composition of the clay produced a yellow paste rather than a red one.

Slip Lined Coarse Red Earthenware

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Clay Pipes/White Ball Clay

White clay pipes were being mass-produced in Scotland, England, Canada, Germany and France by the 19th century. These pipes stems were typically marked along the stem with the maker and city of manufacture. These marks do not provide a specific date but provide the manufacturing date ranges of production (Walker 1970). As white clay pipes have a long use history they are very difficult to date with precision and are typically not used for dating a site.

Bottle Glass

Machine Made Bottle Glass

In the late 19th Century a trend started toward the manufacture of bottles with semi-automatic and fully automatic machines. Machine made bottles are hollowware containers shaped using air pressure supplied by a machine, both automatic and semi-automatic machines

produce bottle with similar characteristics. The first workable semi-automatic machines were patented in 1881 in the United States and in 1886 in England, in the next few decades machine made containers become increasingly popular as they are cheaper to produce with continually refined techniques; by the early 20th Century hand blown bottle are becoming uncommon.

Undiagnostic Bottle Glass

These pieces are likely from two-piece moulded vessels or from vessels produced using two-or-more vertical body moulds with separate bases. However these pieces were too small or did not have any diagnostic traits needed to identify the technology used in there manufacture.

Contact Moulded Bottle Glass

Contact moulding is a process by which full-sized objects or portions of objects are formed in a mould using air pressure from a mouth or machine. Hot glass is introduced into a mould, that may or may not have had a design, and expanded by air pressure until it fills the mould, at which point the object or partial object is removed. This technique was used during Roman times extensively for containers. It was reintroduced in the 17th Century but did not come into wide use in containers until the 18th Century (Jones and Sullivan 1989: 23-24).

Pressed Glass Tableware

During the press moulding manufacturing process hot glass is dripped into a mould which might consist of any number of pieces. The only limitation to the process is that the plunger must be able to enter and exit the mould without the necessity of it being opened. For decorated pieces, a design is embossed on the on the interior surface of the mould. The glass takes the form of the mould on its outer surface while the plunger shapes the inner surface. Once the object is removed from the mould it may be fire polished to restore the brilliance of the glass which has been lost due to contact with the mould (Jones and Sullivan 1989: 33)

Press moulding has been used on a small scale in England since the late 17th Century. At this time it was employed in the production of small solid objects such as imitation precious stones, glass seals, watch faces, etc. By the 1780s decanter stoppers and feet for vessels were being made using this technique. During the 1820s the technique was further developed in the United States and applied to the manufacture of complete vessels. By the early 1830s mass production of pressed table wares was underway in the New England states. Early pressed glass was manufactured primarily out of lead glass. William Leighton developed a lime glass in 1864 which resembled lead glass, but was one third cheaper. Non-lead glass becomes common on Canadian sites from about 1870 onward (Jones and Sullivan 1989: 34-35)

Nails

Cut Nails

Around 1800, machines for cutting nails began to be used. At first these were simple machines resembling a table with a guillotine-like knife at one end. Strips of metal which were as broad as the resulting nails were to be long were fed against the blade. The strip of metal was shifted from side-to-side following each cut. This produced the tapered shank of the nail. Nails made by this method remained square in cross section and still required heads to be fashioned by hand. Around 1820 improved machines were developed for the manufacture of cut nails which included mechanical headers (Rempel 1980: 369). In general terms, cut nails dominated the construction industry from roughly 1825 to 1890 when they were displaced by wire nails.

Forged Nails

Towards the end of the 18th Century all nails were made by the blacksmith out of nail stock. Nail stock was typically produced by a special mill on location at the iron works. Wrought iron strips were fed into the mill which cut it into sections which were square in cross-section. The resulting nail stock was cut into the required length by the smith, then heated, tapered and headed. These nails were not displaced by cut nails until around 1825 in developed areas. In more remote areas forged nails remained in use quite longer. This was especially the case with larger spikes which were often required to meet very particular specifications and not required in quantity (Rempel 1980: 367). Blacksmiths continued to fill the void between accessibility to commercial products and the needs of their clients into the first three decades of the twentieth century. Forged nails most likely date to the first half of the 19th Century although it is possible that they were produced at a later date.

Bullets

In 1823 Captain Norton of the British Army introduced devised a bullet shaped like a cylinder with a hollow concave base and a pointed tip. This became the basis for the modern bullet and the mathematical term for the shape is a “right-truncated cylindro-ogival”. Twenty-five years later, the bullet was matched to a workable paper cartridge by Captain C. E. Minie of France and the “minny ball” was born. The earliest self-igniting metal cartridge followed soon after the union of these two pieces. In 1842 Dreyse’s needle gun was patented. The needle gun cartridge had a projecting pin from the base of the cartridge that was struck by the flat hammer of the firearm. This development included the innovation of the expansive gas cartridge. This important development allows a brass cartridge to expand under pressure once ignited. This at once releases the bullet and forms an air tight pressure seal in the breach of the weapon and results in higher pressure behind the fired cartridge leading to higher velocity and longer distance of travel. The drawbacks to this cartridge design were that they were easily damaged and ignited if mishandled or dropped and they tended to corrode around the protruding pin in storage or moist environments making them unserviceable. The solution to this problem took two forms: the rimfire cartridge and the centrefire cartridge. In a rim fire cartridge the fulminate for ignition of the main charge is in a narrow band around the crimped edge of the cartridge. This design works well but only for small caliber low velocity rounds. The modern .22 cartridge is an example of this method. The centrefire cartridge was developed during the 1850s. In this configuration a percussion cap is seated in the centre of the base of the round. By 1870 this form of cartridge was used

for nearly all high velocity rounds and after 1870 for nearly every caliber of small arms ammunition (Held 1959: 183-184).

Bakelite

Bakelite is an early form of brittle plastic made from formaldehyde and phenol, used chiefly for electrical equipment. It was developed in 1907 and patented in New York state in 1909 (American Chemical Society, 1993: 1).