REVISED REPORT

Stage 3 Archaeological Assessment

Aberfoyle South Pit Expansion (CBM Lake Property), Location 3 (AiHb-375), 6947 Concession Road 2, Puslinch, Part of Lot 18, Concession 1, Geographic Township of Puslinch, County of Wellington, Ontario

Licensee: Rhiannon Fisher, MSc, RPA (P468)
PIF: P468-0065-2020

Submitted to:

CBM Aggregates, a division of St. Marys Cement Inc. (Canada)

7366 McLean Road, R.R. #22
Cambridge, ON N3C 2V4

Submitted by:

WSP Canada Inc.
00 Scotia Court, Whitby, Ontario, L1N 8Y6, Canada

+1 905 723 2727

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Executive Summary

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

A Stage 3 archaeological assessment was conducted on behalf of CBM Aggregates (CBM; the client), a division of St. Marys Cement Inc. (Canada) by Golder Associates Ltd. (Golder), now WSP Canada Inc., in support of a licence application for extraction under the *Aggregate Resources Act* (ARA) for the new Aberfoyle South Pit Expansion, in the Township of Puslinch.

The Study Area for the Stage 1-2 archaeological assessment, completed by Golder in 2019, measured approximately 46 hectares in size and can be described as primarily agricultural field with some manicured lawn, surrounding a home and farm buildings. The Stage 1-2 Study Area included a portion of Lots 18, 19, and 20, Concession 1 in the Township of Puslinch in the County of Wellington, Ontario (Map 1).

The Stage 2 archaeological assessment resulted in the identification of 6 locations and 19 findspots; 3 of which were considered to exhibit cultural heritage value or interest and were recommended for Stage 3 archaeological assessment, including Location 3 (AiHb-375), which is addressed in this report.

Location 3 (AiHb-375) was identified via pedestrian survey during the Stage 2 archaeological assessment along the western boundary of the Study Area in a 130 m (north-south) by 160 m (east-west) area with a concentration of artifacts within a 60 m (north-south) by 40 m (east-west) radius.

The Stage 2 archaeological assessment identified Location 3 (AiHb-375) as being related to the 19th century occupation of the property. The artifacts recovered were interpreted to date to the mid to late-19th century and no substantial pockets of 20th century material were recovered. Given the cultural heritage value and information potential of this site, Stage 3 archaeological assessment was recommended (Golder 2019). While the overall Study Area for the project extends over three Lots, Location 3 (AiHb-375) is contained exclusively within the northern portion of Lot 18, Concession 1 in the Township of Puslinch in the County of Wellington, Ontario (Supplementary Document A).

The Stage 3 archaeological assessment of Location 3 (AiHb-375) was conducted over a total of 8 days on 28 and 30 October 2020, 3-5 November 2020, and 9-11 November 2020, and involved the hand excavation of 52 1m^2 test units across the site. Given that Location 3 (AiHb-375) was identified during the Stage 2 assessment and subsequent Stage 3 Controlled Surface Pickup (CSP) by three artifact concentrations within a 60 m by 60 m area, the excavation of test units followed the strategy for large, plough disturbed sites, as per *Section 3.2.3, Table 3.1, Standards 5, 6, and 7 (Government of Ontario 2011).*

The Stage 3 archaeological assessment of Location 3 (AiHb-375) resulted in the recovery of 6,839 artifacts from 52 test units and the CSP including 6,347 Euro-Canadian artifacts, 475 faunal elements, 16 pre-contact Indigenous artifacts and one piece of recent material.

The above evidence suggests that the artifact assemblage from Location 3 (AiHb-375) can be associated with the 19th century occupations on the property by either Charles Evans family or the Hogg family's earlier ownership of the land where the site is located. Artifacts that can be assigned smaller date ranges suggest the site reflects a date of occupation between the 1840s to the 1870s. Artifacts with broader date ranges suggest a temporal trend that is consistent with a date of occupation of the mid- to late- 19th century. Though the historical mapping does not illustrate a structure on the property, historical research indicates an earlier occupation of the land. Taken together, the artifact assemblage and archival research support a date of occupation of the mid- to late-19th century. Based on Section 3.4.2, Standard 1a of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), Location 3 (AiHb-375) exhibits further cultural heritage value or interest (CHVI) as at least 80% of the time span of occupation and the artifact assemblage predates 1870.

Based upon the proposed limits of extraction on the license application, it is not possible for Location 3 (AiHb-375) to be avoided. Therefore, the following recommendations are made:

1) The pre-contact Indigenous component does not exhibit further cultural heritage value or interest (CHVI) based on the frequency in which artifacts were recovered over multiple units as per Section 3.4.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

2) Based on the CHVI documented within the artifact assemblage and the Euro-Canadian historical context for Location 3 (AiHb-375), the site will be subjected to Stage 4 mitigation by excavation be conducted as per Section 4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). As the artifact assemblage postdates 1830, Section 4.2.7 Standard 2 applies, which requires all midden areas to be hand excavated, followed by mechanical topsoil removal of the remainder of the site. As the site is located within plough zone which has resulted in the artifacts being disturbed and redistributed and therefore are not in situ, as well as the high counts of artifacts in multiple units no potential midden areas were identified during the Stage 3 Archaeological Assessment. Based on these conditions, mechanical topsoil removal of the site can proceed immediately. Mechanical topsoil removal should be undertaken with a backhoe or gradall-type excavator with a flat-edged bucket and should stop at subsoil interface, at which time the subsoil should be assessed for cultural features as per Section 4.2.3., Standard 2 and 3, and must be completed 10 m beyond any identified archaeologically significant features, up to the limits of the proposed area of impact.

3) Excavation will only be conducted when weather and lighting conditions meet the requirements of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). Following mechanical topsoil removal, all identified cultural features will be documented with photographs and drawings, and subsequently hand excavated. If larger cellar features are encountered, a minimum of two opposing quadrants must be hand excavated. All architectural remains must be documented with scale drawing and photographs, and all structural features must be excavated according to the requirements for complex stratified sites. All excavated feature soil will be screened through 6 mm wire mesh to facilitate artifact recovery. A thorough photographic record of the Stage 4 mitigation must be maintained.

4) A report documenting the methods and results of the Stage 4 mitigation and laboratory analysis of the artifacts, together with an artifact inventory, and all necessary cartographic and photographic documentation must be produced in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

5) Until such time that Location 3 (AiHb-375) can undergo the recommended Stage 4 excavation, the site should be avoided and protected by establishing a “no-go” zone consisting of the site and a 10 m protective buffer (Map 10). The proposed protected area must be shown on all contract drawings, when applicable, and be labeled as a “no-go” zone. Instructions should be provided to all construction staff to stay outside of this area. Any ground alterations to Location 3 (AiHb-375) and its protective buffer area should be avoided. This includes but is not necessarily limited to impacts from aggregate extraction, aggregate processing, vegetation clearance, and the construction of access roads or berms over the site. It also includes minor forms of soil disturbance, such as tree removal, minor landscaping, and utilities installation. If grading or other soil disturbing activities are anticipated to extend to the edge of the area to be avoided, then a temporary barrier must be erected around Location 3 (AiHb-375) and its 10 m protective buffer. No-go instructions must be given to all on site extraction crew and others involved in the day-to-day decisions on site, and a licensed archaeologist should be contracted to inspect and monitor the effectiveness of the avoidance strategy. After completion of these activities, a report will be prepared on the effectiveness of the strategy.

The Ontario Ministry of Citizenship and Multiculturalism is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry’s 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

Study Limitations

Golder (now WSP Canada Inc.) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to WSP by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) (the client). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without WSP's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, WSP may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to WSP. The report, all plans, data, drawings, and other documents as well as electronic media prepared by WSP are considered its professional work product and shall remain the copyright property of WSP, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of WSP. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore the Client cannot rely upon the electronic media versions of WSP's report or other work products.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists.*

Personnel

Project Director	George Schneider, MSc, P.Geo., Senior Geoscientist
Project Manager	Heather Melcher, MSc, Director, Ecology – Ontario Earth and Environment
Archaeology Task Lead	Rhiannon Fisher, MSc, RPA (P468), Senior Archaeologist
Licensed Archaeologist	Rhiannon Fisher
Field Supervisor	Sarah News, BA (R485)
Field Technicians	Tatiana Istomina, PhD (R288), Oleksiy Vasylenko, MA (R287), Megan Kirkham, BA, Christine Yellowlees, BSc (R445), Will Pettes, BA, Jessica Figura, BA, Martha Tildesley, MA, RPA (P399)
Report Production	Sarah News, Martha Tildesley
GIS	Dave Hoskings, Senior GIS Technician
	Andrew Sabourin, GIS Technician
	Bojan Radojevic, GIS Analyst
	Andressa Machado, Drafter
Technical Review	Rhiannon Fisher
Senior Review	Aaron Mior, M.MA, (P1077) Senior Archaeologist

Acknowledgments

Proponent Contacts	Stephen May, Votorantim Cimentos (CBM Aggregates)
	David Hanratty, Votorantim Cimentos (CBM Aggregates)
Mississauga's of the Credit First Nation	Megan DeVries, Cody Bushell

Table of Contents

TABLES

IMAGES

MAPS

APPENDICES

1.0 PROJECT CONTEXT

1.1 Development Context

A Stage 3 archaeological assessment was conducted on behalf of CBM Aggregates (CBM; the client), a division of St. Marys Cement Inc. (Canada) by Golder Associates Ltd. (Golder), now WSP Canada Inc.,, in support of a licence application for extraction under the *Aggregate Resources Act* (ARA) for the new Aberfoyle South Pit Expansion, in the Township of Puslinch.

The Study Area for the Stage 1-2 archaeological assessment, completed by Golder in 2019, measured approximately 80 hectares in size and can be described as primarily agricultural field with some manicured lawn, surrounding a home and farm buildings. The Stage 1-2 Study Area included a portion of Lots 18, 19, and 20, Concession 1 in the Township of Puslinch in the County of Wellington, Ontario (Map 1).

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The Stage 3 archaeological assessment was conducted under professional consulting licence P468, issued to Rhiannon Fisher of WSP (PIF P468-0065-2020). All activities undertaken during the assessment followed the *Ontario Heritage Act* and the Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (2011).

Permission for WSP staff to enter the property to conduct archaeological excavation and collect and remove artifacts was provided by Stephen May of CBM.

1.2 Objectives

The objectives of Stage 3 archaeological assessment, as outlined by the 2011 *Standards and Guidelines for Consultant Archaeologists* published by the MCM, are as follows:

- To determine the extent of the archaeological site and the characteristics of the artifacts;
- To collect a representative sample of artifacts;
- To assess the cultural heritage value or interest of the archaeological site; and,
- To determine the need for mitigation of development impacts and recommend appropriate strategies for mitigation and future conservation.

1.3 Historical Context

1.3.1 General Overview of the Pre-Contact Period in Southern Ontario

The culture history of south-central Ontario, based on Ellis and Ferris (1990), is summarised in Table 1.

Table 1: Pre-contact Indigenous cultural chronology for south-central Ontario.

Period		Time Period	Characteristics
Paleo	Early	10,950 – 10,350 BP	Gainey, Barnes and Crowfield traditions; small bands; mobile hunters and gatherers; utilization of seasonal resources and large territories; fluted projectiles
	Late	10,350 – 9,950 BP	Holcombe, Hi-Lo and Lanceolate biface traditions; continuing mobility; campsite/way-station sites; smaller territories are utilized; non-fluted projectiles
Archaic	Early	9,950 – 7,950 BP	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate Base traditions; growing diversity of stone tool types; heavy woodworking tools appear (e.g., ground stone axes and chisels)
	Middle	7,950 – 4,450 BP	Stemmed (Kirk, Stanley/Neville), Brewerton side- and corner-notched traditions; reliance on local resources; populations increasing; more ritual activities; fully ground and polished tools; net-sinkers common; earliest copper tools
	Late	4,450 – 2,900 BP	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; less mobility; use of fish-weirs; formal cemeteries appear; stone pipes emerge; long-distance trade (marine shells and galena)
Woodland	Early	2,900 – 2,350 BP	Meadowood tradition; cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; bands of up to 35 people
	Middle	2,350 – 1,400 BP	Saugeen tradition: stamped ceramics appear; Saugeen projectile points; cobble spall scrapers; Seasonal settlements and resource utilization; post holes, hearths, middens, cemeteries, and rectangular structures identified
	Transitional	1,400 – 1,050 BP	Princess Point tradition; cord roughening, impressed lines, and punctate designs on pottery; adoption of maize horticulture at the western end of Lake Ontario; oval houses and ‘incipient’ longhouses; first palisades; villages with up to 75 people

Period		Time Period	Characteristics
	Late	1,050 – 650 BP	Glen Meyer tradition: settled village-life based on agriculture; small villages (0.4 ha) with 75–200 people and 4–5 longhouses; semi-permanent settlements
		650 – 550 BP	Uren and Middleport traditions; classic longhouses emerge; larger villages (1.2 ha) with up to 600 people; more permanent settlements (30 years)
		550 – 350 BP	Larger villages (1.7 ha); examples up to 5 ha with 2,500 people; extensive croplands; Also, hamlets, cabins, camps, and cemeteries; potential tribal units; fur trade begins ca. 1580; European trade goods appear

* (BP) Before Present Era dates are calculated using the year 1950 as the recognized start date of the present era.

1.3.1.1 Paleo Period

The first human occupation of southern Ontario began just after the end of the Wisconsin Glacial Period. Although there was a complex series of ice retreats and advances that played a significant role in shaping the local topography, south-central Ontario was ultimately ice-free by 12,500 years ago.

The first human settlement can be traced back to 11,000 years ago when this area was settled by Indigenous groups that had been living south of the Great Lakes. The period of these early Indigenous inhabitants is known as the Paleo Period (Ellis and Deller 1990).

Our current understanding of Early Paleo people's settlement patterns suggests that small bands, consisting of no more than 25-35 individuals, followed a pattern of seasonal mobility extending over vast territories. One of the most thoroughly studied of these groups followed a seasonal round that extended from as far south as Chatham to the Horseshoe Valley north of Barrie. Early Paleo Period sites tend to be located in elevated locations on well-drained loamy soils. Many of the known sites were located on former beach ridges associated with glacial lakes. There are a few extremely large Early Paleo Period sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares. These sites were formed when the same general locations were occupied for short periods over many years. Given their placement in locations conducive to the interception of migratory mammals such as caribou, it has been suggested that they may represent communal hunting camps. There are also smaller Early Paleo camps scattered throughout the interior of southwestern and south-central Ontario, usually situated adjacent to wetlands.

The most recent research suggests that population densities were very low during the Early Paleo Period (Ellis and Deller 1990:54). Archaeological examples of Early Paleo Period sites are generally rare.

The Late Paleo Period (10,350 – 9,950 BP) has been less well researched and is consequently more poorly understood. By this time, the environment of south-central Ontario was coming to be dominated by closed coniferous forests with some minor deciduous elements. It seems that many of the large game species that had been hunted in the early part of the Paleo Period had either moved further north or as in the case of the mastodons and mammoths, became extinct.

Like the Early Paleo peoples, Late Paleo peoples covered large territories as they moved about in response to seasonal resource fluctuations. On a province-wide basis, Late Paleo projectile points are far more common than Early Paleo materials, suggesting a relative increase in population.

The end of the Late Paleo Period was heralded by numerous technological and cultural innovations that appeared throughout the Archaic Period. These innovations may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

1.3.1.2 Archaic Period

During the Early Archaic Period (9,950 – 7,950 BP), the jack and red pine forests that characterized the Late Paleo Period environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis, Kenyon, and Spence 1990:68-69). One of the more notable changes in the Early Archaic Period is the appearance of side and corner-notched projectile points. Other significant innovations include the introduction of ground stone tools such as celts and axes, suggesting the beginnings of a simple woodworking industry. The presence of these often large and not easily portable tools suggests there may have been some reduction in the degree of seasonal movement, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic Period (7,950 – 4,450 BP) the trend to more diverse toolkits continued, as the presence of netsinkers suggests that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured.

Bannerstones are carefully crafted ground stone devices that served as a counterbalance for atlatls or spear-throwers. Another characteristic of the Middle Archaic is an increased reliance on local, often poor-quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, they could visit a primary outcrop of high-quality chert at least once during their seasonal round. However, during the Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high-quality raw material. In these instances, lower-quality materials which had been deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size was probably the result of gradual region-wide population growth which led to the infilling of the landscape. This process forced a reorganization of Indigenous subsistence practices, as more people had to be supported by the resources of a smaller area. During the latter part of the Middle Archaic, technological innovations such as fish weirs have been documented as well as stone tools specially designed for the preparation of wild plant foods.

It is also during the latter part of the Middle Archaic Period that long-distance trade routes began to develop, spanning the northeastern part of the continent. In particular, native copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis, Kenyon, and Spence 1990:66). By 5520 BP the local environment had stabilized in a near modern form (Ellis, Kenyon, and Spence 1990:69).

During the Late Archaic (4,450 – 2,900 BP) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had expanded. It is during the Late Archaic that the first true cemeteries appear. Before this time individuals were interred close to the location where they died. During the Late Archaic, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery. Consequently, it is not unusual to find disarticulated skeletons, or even skeletons lacking minor elements such as fingers, toes, or ribs, in Late Archaic burial pits.

The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses.

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also, during the Late Archaic, the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods. Other artifacts such as polished stone pipes and banded slate gorgets also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the birdstone, which are small, bird-like effigies usually manufactured from green banded slate.

1.3.1.3 Woodland Period

The Early Woodland Period (2,900 – 2,350 BP) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples. The first pots were very crudely constructed, thickly walled, and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil. These vessels were not easily portable, and individual pots must not have enjoyed a long use life. There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that these poorly constructed, undecorated vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this limited ceramic technology, the lifeways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic Period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads.

Likewise, the thin, well-made projectile points which were produced during the terminal part of the Archaic Period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.

The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland Period. During the last 200 years of the Early Woodland Period, projectile points manufactured from high-quality raw materials from the American Midwest begin to appear on sites in southwestern Ontario.

In terms of settlement and subsistence patterns, the Middle Woodland (2,350 – 1,400 BP) provides a major point of departure from the Archaic and Early Woodland Periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish was becoming an even more important part of the diet.

Also, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often heavily decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland Period that rich, densely occupied sites appear along the margins of major rivers and lakes. While these areas had been utilized by earlier peoples, Middle Woodland sites are significantly different in that the same location was occupied periodically for as long as several hundred years

and large deposits of artifacts often accumulated. Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied periodically over the year. There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special-purpose camps from which localized resource patches were exploited. This shift towards a greater degree of sedentism continued the trend witnessed from at least the Middle Archaic times and provides a prelude to the developments that follow during the Late Woodland Period.

The Late Woodland Period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990:185; Smith 1990; Williamson 1990:312). Corn may have been introduced into southwestern Ontario from the American Midwest as early as AD 600 or a few centuries before. Corn did not become a dietary staple, however, until at least three to four hundred years later, and then the cultivation of corn gradually spread into south-central and southeastern Ontario.

During the early Transitional Woodland Period, particularly within the Princess Point Complex (circa 1,400 – 1,050 BP), several archaeological material changes have been noted: the appearance of triangular projectile point styles, first seen during this period begins with the Levanna form; cord-wrapped stick decorated ceramics using the paddle and anvil forming technique replaces the mainly coil-manufactured and dentate stamped and pseudo-scallop shell impressed ceramics; and if not appearance, increasing use of maize (Zea mays) as a food source (e.g., Bursey 1995; Crawford et al. 1997; Ferris and Spence 1995:103; Martin 2004 [2007]; Ritchie 1971:31-32; Spence et al. 1990; Williamson 1990:299).

The Transitional Woodland Period is widely accepted as the beginning of agricultural lifeways in south-central Ontario. Researchers have suggested that a warming trend during this time may have encouraged the spread of maize into southern Ontario, providing a greater number of frost-free days (Stothers and Yarnell 1977). Further, shifts in the location of sites have also been identified with an emphasis on riverine, lacustrine, and wetland occupations set against a more diffuse use of the landscape during the Middle Woodland (Dieterman 2001).

One such site, located on the Grand River near Cayuga, Ontario is the Grand Banks site (AfGx-3). As of 1997, 40 maize kernels and 29 cupules had been recovered at this site (Crawford et al. 1997). The earliest AMS radiocarbon assay run on maize from paleosol II produced a date of approximately 1520 BP (Crawford et al. 1997:116). This site is interpreted as a long-term basecamp that may have been used year-round or nearly year-round (Crawford and Smith 1996:785). This growing sedentism is seen as a departure from Middle Woodland hunting and gathering and may reflect growing investment in the care of garden plots of maize (Smith 1997:15). The riverine location of Grand Banks (AfGx-3) may have also provided light, nutrient-rich soil for agriculture (Crawford et al. 1997). While Levanna projectile points are formal tools, Princess Point Complex toolkits are predominantly characterized by informal or expedient flake tools and ground stone and bone artifacts are rare (Ferris and Spence 1995:103; Shen 2000). At Grand Banks, experimental archaeology suggests that chert flakes were put to a variety of useful tasks, from butchering to bone-working to woodworking to plant-working. Formal bifaces and projectile points had less evidence of usewear (Shen 2000). Local cherts appear to have been used, although Onondaga, albeit also a local resource, was preferred at Grand Banks (AfGx-3) (Shen 1997).

The first agricultural villages in southern Ontario date to the 10th century. Unlike the riverine base camps of the Middle Woodland Period, these sites are typically located in the uplands, on well-drained sandy soils. Often categorized as "Early Ontario Iroquoian" (1,050 – 650 BP), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which later inhabited southern Ontario at the time of first European contact, back to these early villagers.

Village sites dating between 1120 and 720 BP, share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were not particularly large, averaging only 12.4 m in length (Dodd et al. 1990:349; Williamson 1990:304-305). It is also quite common to find the outlines of overlapping house structures, suggesting that these villages were occupied long enough to necessitate re-building.

The Jesuits reported that the Huron moved their villages once every 10-15 years when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2010). It seems likely that Early Ontario Iroquoians occupied their villages for considerably longer, as they relied less heavily on corn than did later groups, and their villages were much smaller, placing less demand on nearby resources.

Judging by the presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits, agriculture was becoming a vital part of the Early Ontario Iroquoian economy. However, it had not reached the level of importance it would in the Middle Late and Late Woodland Periods. There is ample evidence to suggest that more traditional resources continued to be exploited and comprised a large part of the subsistence economy. Seasonally occupied special-purpose sites relating to deer procurement, nut collection, and fishing activities, have all been identified. While beans are known to have been cultivated later in the Late Woodland Period, they have yet to be identified on Early Ontario Iroquoian sites.

The period dating to 650 – 550 BP witnessed several interesting developments in terms of settlement patterns and artifact assemblages. Changes in ceramic styles have been carefully documented, allowing the placement of sites in the first or second half of this 100-year period. Moreover, villages, which averaged approximately 0.6 hectares in extent during the “Early Ontario Iroquoian Period,” now consistently range between one and two hectares on average.

House lengths also change dramatically, more than doubling to an average of 30 m, while houses of up to 45 m have been documented. This increase in longhouse length has been variously interpreted. The simplest possibility is that increased house length is the result of a gradual, natural increase in population (Dodd et al. 1990:323, 350, 357; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around 650 BP. Other possible explanations involve changes in the economic and socio-political organization (Dodd et al. 1990:357). One suggestion is that during the period dating to 650 – 550 BP small villages were amalgamating to form larger communities for mutual defense (Dodd et al. 1990:357). If this were the case, the more successful military leaders may have been able to absorb some of the smaller family groups into their households, thereby requiring longer structures. This hypothesis draws support from the fact that some sites had up to seven rows of palisades, indicating at least an occasional need for strong defensive measures. There are, however, other villages from this time that had no palisades present (Dodd et al. 1990). More research is required to evaluate these competing interpretations.

The layout of houses within villages also changes dramatically by 650 BP. During the “Early Ontario Iroquoian Period,” villages were haphazardly planned, with houses oriented in various directions. During the period dating to 650 – 550 BP, villages are organized into two or more discrete groups of tightly spaced, parallel aligned, longhouses. It has been suggested that this change in village organization may indicate the initial development of the clans which were a characteristic of the historically known Iroquoian peoples (Dodd et al. 1990:358).

Initially at least, the period dating to 550-300 BP continues many of the trends which have been documented for the proceeding century. For instance, between 550 and 500 BP house lengths continue to grow, reaching an average length of 62 m. One longhouse excavated on a site southwest of Kitchener was an incredible 123 m (Lennox and Fitzgerald 1990:444-445). After 500 BP, house lengths begin to decrease, with houses dating between 450 and 370 BP averaging 30 m in length.

Why house lengths decrease after 500 BP is poorly understood, although it is believed that the even shorter houses witnessed on Historical Period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990:405, 410).

Village size also continues to expand throughout 550 – 300 BP, with many of the larger villages showing signs of periodic expansions. Between 550 – 200 BP was a time of village amalgamation. One large village situated just north of Toronto has been shown to have expanded on at least five occasions. These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together. Village expansion has been documented at several sites throughout southwestern and south-central Ontario. The ongoing excavations at the Lawson site, a large Late Iroquoian village located in southwestern Ontario, has shown that the original village was expanded by at least twenty percent to accommodate the construction of nine additional longhouses (Anderson 2009).

During the late 1600s and early 1700s, the French explorers and missionaries reported a large population of Iroquoian peoples clustered around the western end of Lake Ontario. The area which was later to become Halton Region was known to have been occupied by ancestors of two different Late Ontario Iroquoian groups who evolved to become the historically known Neutral and Huron. For this reason, the Late Ontario Iroquoian groups which occupied parts of south-central Ontario before the arrival of the French are often identified as "Prehistoric Neutral" and “Prehistoric Huron” (Lennox and Fitzgerald 1990; Smith 1990:283).

1.3.2 Post-Contact Indigenous Period

The post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples from modern-day New York State and the subsequent return of Algonkian-speaking groups from northern Ontario at the end of the 17th century and beginning of the 18th century (Schmalz 1991).

Following the arrival of Europeans to North America, the nature of Indigenous settlement size, population distribution, and material culture shifted as settlers began to colonize the land. Despite this shift in Indigenous life ways, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009:114). This deep continuity is reflected in the oral and written histories of the Anishinaabek peoples as well. As a result, Indigenous peoples of southern Ontario have left behind archaeologically significant resources throughout southern Ontario which show continuity with past peoples, even if this connection has not been recorded in historical Euro-Canadian documentation.

The Study Area is situated within the historic Geographic Township of Puslinch, Wellington County, Ontario. The Study Area is within lands that first enter the Euro-Canadian historic record as part of Treaty Number 3 made with the Mississauga on December 7, 1792, though the original ‘Between the Lakes’ purchase for the land occurred in 1784. This purchase was to procure a permanent place for that part of the Six Nations coming into Canada.

> *All that parcel or tract of land lying and being between the Lakes Ontario and Erie, beginning at Lake Ontario, four miles south' westerly from the point opposite to Niagara Fort, known by the name of Mississaugue Point, and running from thence along the said lake to the creek that falls from a small lake, known by the name of Washquarter into the said Lake Ontario, and from thence north forty-five degree west, fifty miles; thence south forty-five degrees west, twenty miles; and thence south until it strikes the River La Tranche; then down the stream of the said river to that part or place where a due south course will lead to the mouth of Catfish Creek emptying into*

> *Lake Erie, and from the above-mentioned part or place of the aforesaid River La Tranche, following the south course to the mouth of the said Catfish Creek; thence down Lake Erie to the lands heretofore purchased from the Nation of Mississauga Indians; and from thence along the said purchase at Lake Ontario at the place of beginning as above mentioned together with all the woods, ways, paths, waters, watercourses and appurtenances thereunto belonging.*
>
> Morris 1943:18

1.3.3 Euro-Canadian Settlement

1.3.3.1 Puslinch Township, Wellington County

In 1838, the District of Wellington was established and contained the counties of Wellington, Waterloo, Grey and parts of Dufferin County. In 1854, Wellington County was formed and included the Townships and Towns of Amaranth, Arthur, Eramosa, Erin, Guelph, Maryborough, Nichol, Peel, Pilkington, Puslinch and Garafraxa (Wellington County 2017).

The Crown Survey of Puslinch Township began in 1828 and was completed by 1831. Settlers began to arrive in 1828 and the entire township was settled by 1840. The township was surveyed using a variation of the Double Front survey system that was commonly used between 1815 and 1829. The survey system produced a rectangular pattern of ten 100-acre lot allowances. The resulting survey created the modern farm landscape and road pattern that is still visible today (OAC 1880). Puslinch was named after a community in Devonshire, England. The population of Puslinch Township in 1829 – one year after surveying began – was 126. By 1877 the population had grown to 4,514. In the same year, the township was described as the "least valuable in an agricultural point of view, of any in the county" (Carter 1984).

Until 1852 the Study Area was a part of the District of Wellington, which included the counties of Wellington, Waterloo, Grey and parts of Dufferin County. In 1852, the district was reorganized, and the United Counties of Waterloo, Wellington and Grey were formed. In 1854, Wellington County became an individual entity that consisted of the Towns and Townships of Amaranth, Arthur, Eramosa, Erin, Guelph, Garafraxa, Maryborough, Nichol, Peel, Pilkington, and Puslinch. In 1879, the City of Guelph separated from the County. The county remained politically unchanged until 1999 when it was reorganized into seven new municipalities through the amalgamation of several towns and townships. Puslinch Township remained the only municipality to exist unchanged by the amalgamation. However, recent expansions of Guelph's city limits have resulted in portions of Puslinch being annexed into the City.

1.3.3.2 Lot 18, Concession 1, Township of Puslinch

The Location 3 (AiHb-375) Study Area is located on part of Lot 18, Concession 1 (Concession 1, Rear), Geographic Township of Puslinch, Wellington County.

Archival records maintained by the Puslinch Historical Society indicate that Lot 18, Concession 1, Rear was first occupied in 1832 by a Hector Smith. Archival records indicate that the property was first owned in 1832 by a Charles Evans and Adam Dunn, and the 1851 census places Charles Evans as living on the property with his family (Town of Puslinch 2022).

The Crown Patent map of Wellington County illustrates that James Hogg purchased the northern half of Lot 18, Concession 1, Rear, as well as the northern portions of Lots 19 and 20, Concession 1, Rear, and the southern portion of Lot 20, Concession 2, Front, from the Crown (Map 2).

The 1861 map of Puslinch Township lists James Hogg and his son John as the owners of Lot 18, Concession 1, Rear (Map 3). Based on the 1851 census information which places Charles Evans as living on the property and 1861 map of Puslinch Township which places James Hogg on the property it is presumed that James Hogg purchased Lot 18, Concession 1, Rear sometime after 1851 and before 1861.

The 1861 map of Puslinch Township indicates that James Hogg owns the northern portions of Lots 19 and 20, Concession 1, Rear in addition to Lot 18, Concession 1, Rear. Despite archival and census records indicating occupation of Lot 18, Concession 1, Rear, prior to 1861 there are no structures illustrated on Lot 18 nor James Hoggs' neighbouring lots (Map 3).

Archival records indicate that Lot 18, Concession 1, Front, was occupied by Malcolm Smith in 1832. By 1854, Lot 18, Concession 1, Front, was occupied by James McPhatter and his family. The 1851 census indicates that James McPhatter was a farmer and had arrived from Scotland. He and his brother settled on adjacent lots on Concession 1 (Town of Puslinch 2022). While the census does not indicate a homestead, James McPhatter, and his family are noted as living on the lot by 1854 and is depicted as owning the southern portion of the lot in 1861 (Map 3). Richard Bond is listed as a freeholder on Lot 18, Concession 1, Front by 1867 (Gazetteer and Directory, County of Wellington 1867).

The 1867 Gazetteer and Directory of the County of Wellington does not list a freeholder or householder for the Lot 18, Concession 1, Rear in which the Study Area is located, and it is unclear as to whether anyone is residing on the property at this time.

Archival records maintained by the Puslinch Historical Society indicate that there was a stone home built on Lot 18, Concession 1, Rear for John Hogg by John McQuillan though it is not clear when this home was built. Based on the information summarized above it can be surmised that the stone home was built sometime after 1851. Optimist club records state that the stone home, which differs from the extant home built after 1877 discussed below, burnt down in 1956 (Town of Puslinch 2022).

The 1871 personal census indicates that James Hogg and his family were living in Puslinch Township and owned a total of 400 acres although only Lots 18, 19, and 20, Concession 1 are listed. 170 acres are listed as 'improved' with 50 in pasture, 10 in wheat, 40 in hay, and various amounts in other crops. The farm raised 8 horses, seven milk cows, 15 cattle, 33 sheep, and eight pigs and produced 200 pounds of butter, 1000 pounds of home-made cheese, and 140 pounds of wool. James Hogg was a 62-year-old widowed farmer from Scotland, and he lived on the property in Lot 20, Concession 2 with his son John (37) and John's wife Mary (28) and their children: Barbara (3) and Mary (1). The widowed Barbara Ramsay (84) was also enumerated in the census though it is not certain how she may be related to the Hogg family.

The 1877 *Illustrated Historical Atlas of Wellington County* indicates that a combined 400 acres of Lots 18, 19, 20 and 21 in Concession 1 were owned by John Hogg in 1877 (Map 4). The 1877 *Illustrated Historical Atlas of Wellington County* also depicts John Hogg as the owner Lot 20 and Lot 21, Concession 2. The map illustrates two structures, one on Lot 20, Concession 2 and one on Lot 21, Concession 2, however, none are illustrated within the Study Area at this time.

Tax assessment rolls were reviewed for the years 1891 and 1892 for all lots and concessions owned by James Hogg. In both 1891 and 1892, the overall value of the 300 acres of land (Lots 18, 19, and 20, Concession 1) was $4,900 (Family Search 2021). It is noted that of the 300 acres of land owned by James Hogg on Concession 1, Rear, 140 acres of the land was represented by woodlot, 10 acres of land was swamp, and one acre was orchard (Family Search 2021). The remaining 100 acres on Lot 20, Concession 2, valued at $750, with 90 acres represented by woodlot (Family Search 2021). Earlier tax assessment rolls were unavailable at the time this report was produced, as the Archives of Ontario are closed due to the COVID-19 pandemic and only Archives maintained by the Puslinch Historical Society were accessible.

The 1906 *Historical Atlas of Wellington County* indicates that James Hogg owned 300 acres on the north half of Lots 18, 19, and 20, Concession 1. James Hogg is no longer identified as owning Lot 21, Concession 1 nor Lot 20, Concession 2. A structure and driveway are now illustrated on the western portion of the property, within Lot 18, Concession 1 near the current extant home at 6947 Concession 2 (Map 5), which may suggest this structure was established between 1877 and 1906. The northern extent of Location 3 (AiHb-375) is located 160 m southwest of the existing home.

A series of six topographical maps spanning from 1916 to 1968 illustrates the Study Area's relatively uninterrupted rural character and agricultural land use (6A and 6B). A structure is depicted within the northern portion of Lot 18, Concession 1, within the Study Area on all six of these maps in relatively the same location within the property. This suggests the 20th century occupation has been limited to the general area of the existing house still located on the property today.

A soil survey map from 1963 further illustrates the Study Area's relatively uninterrupted rural character and agricultural land use (Map 7).

1.4 Archaeological Context

1.4.1 Natural Environment

The study area is situated within the "Horseshoe Moraines" physiographic region (Chapman and Putnam 1984: 127-129).

> *From the edge of the escarpment in the Town of Caledon the moraines trend somewhat west of the Niagara Escarpment forming a belt of moderately hilly relief…. Associated with the moraines is a system of old spillways with broad gravel terraces and swampy floors…..Good cross-sections of this landscape may be seen along Highway 7 from Rockwood to Georgetown.*
>
> *Chapman and Putnam, 1984:128*

The soils of the Study Area consist predominately of Burford loam and Dumfries soil (Map 7). Burford loam can be found in smooth, very gently sloping areas; this type of soil exhibits good natural drainage and can be slightly stony (Hoffman et al. 1963). Whereas Dumfries can be found in irregular and steeply sloping areas; this type of soil exhibits good natural drainage and can be very stony. Overall, these soil types likely would have been suitable for Indigenous and European settler agricultural practices. The closest potable water source is Mill/Galt Creek which runs along the south and east sides of the greater Study Area and approximately 300 m south of Location 3 (AiHb-375) (alternate names provided by historical and soil type maps, Maps 2 – 7). The closest substantial source of water is Puslinch Lake (~ 4.8 kilometres to the west) of the Study Area (Map 1).

1.4.2 Current Land Uses

Location 3 (AiHb-375) is located within a plough disturbed agricultural field in the northern portion of Lot 18, Concession 1. Location 3 (AiHb-375) is approximately 50 m south of the existing barn structures on the property and approximately 160 m south of the existing house on the property. Location 3 (AiHb-375) is located on top of a knoll, gently sloping on the eastern and southern portions of the site (Map 8, Supplementary Documentation; Tile 1 and 2). The western portion exhibited a much steeper slope, sloping down to the treeline to the west. An overgrown field rock pile and grouping of mature trees is located approximately in the centre of the site and separates the two larger artifact concentrations of the three concentrations identified in the Stage 1-2 archaeological assessment and Stage 3 CSP.

The three artifact concentrations, identified in the Stage 1-2 archaeological assessment and Stage 3 CSP, are located to the east, west, and south of the grouping of mature trees.

1.4.3 Previously Identified Archaeological Sites and Surveys

The registered archaeological site records maintained by the MCM in the Ontario Archaeological Site Database (OASD) were consulted on 8 February 2021 to compile an inventory of archaeological resources.

There are currently two archaeological sites registered in the OASD within a 1 km radius of Location 3 (AiHb-375). Both locations were identified, concurrently to Location 3 (AiHb-375), during the Stage 2 archaeological assessment of the greater Study Area by Golder in 2019 (Table 2).

An additional four archaeological sites are registered in the OASD within a 1 km radius of the Stage 1-2 archaeological assessment Study Area but are not within 1 km of Location 3 (AiHb-375). Table 3 lists the sites within 1 km of the greater Study Area assessed within during the Stage 1-2 (Golder 2019, Golder 2021).

Table 2: Registered Archaeology Sites within 1 kilometre of Location 3 (AiHb-375)

Borden Number	Site Name	Affinity	Time Period	Site Type	Current Development Review Status
AiHb-374	Location 1	Indigenous	Pre-Contact	Scatter	Further CHVI
AiHb-376	Location 5	Indigenous, Euro-Canadian	Pre-Contact, Post-Contact	Findspot, homestead	Further CHVI

Table 3: Registered Archaeology Sites within 1 kilometre of Stage 1-2 Study Area.

Borden Number	Site Name	Affinity	Time Period	Site Type	Current Development Review Status
AiHb-71	Tog 2	Indigenous	Pre-Contact	Findspot	No Further CHVI
AiHb-70	Tog 1	Indigenous	Pre-Contact	Findspot	No Further CHVI
AiHb-354	6P2	Indigenous	Pre-Contact	-	Further CHVI
AiHb-339	-	Indigenous	Pre-Contact	Findspot	Further CHVI

'-' denotes information that is not accessible in the OASD.

No archaeological sites are registered within 300 m of the Study Area. To WSP's knowledge the only previous assessment conducted within 50 m of the Study Area is the Stage 1-2 archaeological assessment conducted by Golder in 2019 under P453-0004-2019. Due to a modification to the proposed extraction plans by the proponent amendments were undertaken to the recommendations for Location 1 (AiHb-374) within P453-0004-2019 and were documented under a new project report and PIF number; P468-0054-2020 (Golder 2021). Location 1 (AiHb-374) will now be situated outside of the area to be licensed and proposed extraction limits and the report was amended to reflect that.

Areas recommended for Stage 2 assessment under P453-0004-2019 were surveyed through a combination of pedestrian and test pit survey at five-meter intervals between 26 June 2019 and 10 July 2019 and resulted in the identification of 6 locations and 19 findspots. Three of the six locations were recommended for further Stage 3 assessment: one pre-contact Indigenous site (Location 1, AiHb-374) and two historical Euro-Canadian sites (Location 3, AiHb-375 and Location 5, AiHb-376).

Findspots 1 through 19 were solitary findspots or locations, all Indigenous in affiliation, with 5 or less artifacts that did not meet the MCM minimum standards for requiring Stage 3 archaeological assessment.

Location 1 (AiHb-374), located 380 m northeast of Location 3 (AiHb-375), consisted of 33 pre-contact Indigenous artifacts from 24 distinct CSP locations. The assemblage consisted of 27 pieces of chipping detritus, four retouched flakes, one biface and one scraper. Location 1 (AiHb-374) measured approximately 30 m (north-south) by 40 m (east-west). Location 1 is considered to exhibit cultural heritage value or interest related to the Indigenous use of the area and Stage 3 archaeological assessment was recommended.

Location 5 (AiHb-376), located 375 m east of Location 3 (AiHb-375), consisted of 81 artifacts from 47 distinct CSP locations. The assemblage consisted of 80 historical Euro-Canadian artifacts dating from the mid to late 19th century and one pre-contact Indigenous artifact. Location 5 (AiHb-375) measures approximately 65 m (north-south) by 55 m (east-west). Location 5 (AiHb-376) is considered to exhibit cultural heritage value or interest relating to the 19th century occupation of the property and Stage 3 archaeological assessment was recommended.

Locations 2, 4 and 6 are all small pre-contact Indigenous sites that do not meet the MCM minimum criteria for requiring Stage 3 archaeological assessment and thus no further archaeological assessment was recommended.

Location 3 (AiHb-375) was identified as a predominately historical Euro-Canadian site. A total of 120 artifacts including 111 historical Euro-Canadian artifacts and nine pre-contact Indigenous artifacts were recovered from 68 distinct CSP locations. Location 3 (AiHb-375) measures approximately 130 metres (north-south) by 160 metres (east-west), with three concentrations of artifacts within an area measuring 60 metres by 40 metres. The pre-contact Indigenous artifacts do not meet the criteria of cultural heritage value or interest as only nine artifacts were recovered, the majority of which were spaced out along the perimeter of site. Location 3 (AiHb-375) is considered to exhibit cultural heritage value or interest related to the mid- to late-19th century historical Euro-Canadian use of the property. As such, Stage 3 site-specific assessment was recommended for the historic Euro-Canadian component of Location 3 (AiHb-375).

The Stage 1-2 archaeological assessment report presented the following recommendations for the Stage 3 assessment of Location 3 (AiHb-357) (Golder 2019, Golder 2021):

- As only a representative sample of the historical Euro-Canadian artifacts were recovered during Stage 2 assessment an additional CSP will be completed as part of the Stage 3 assessment (MCM 2011, Section 3.2.1).
- As a large, plough-disturbed, historical Euro-Canadian site the Stage 3 excavation should be completed as follows (MCM 2011, Table 3.1, Standards 5-7):
  - Place multiple grids of various sizing over areas of artifact concentration and excavate one-metre square test units across those grids at five metre intervals.
  - Place and excavate additional test units, amounting to 20% of the initial grid unit total between the areas of concentration to document areas of lower concentration.
  - Place and excavate further additional test units, amounting to 10% of the initial grid unit total on the periphery of the surface scatter to determine the site extent and sample the site periphery.

- Stage 3 assessment of Location 3 (AiHb-375) should include the hand-excavation of one-metre square test units by stratigraphic level. All Stage 3 test units should be excavated to subsoil at which time the subsoil should be assessed for signs of cultural features. Should signs of cultural features be identified the cleaned subsoil will be drawn, photographed, and covered with geo-textile fabric before being backfilled to protect the features. Should subsoil not reveal any signs of cultural interest, excavation will resume and continue into the first five centimetres of subsoil. All soils excavated from the test units will be screened through hardware cloth with an aperture no larger than 6 mm, to facilitate the recovery of any artifacts that may be present.
- All recovered artifacts should be bagged in the field according to their context and be subject to laboratory analysis. A Stage 3 archaeological assessment report should include all details related to the field work and laboratory analysis.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the Freedom of Information Act. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

2.0 FIELD METHODS

The Stage 3 archaeological assessment of Location 3 (AiHb-375) was conducted over a total of 8 days on 28 and 30 October 2020, 3-5 November 2020, and 9-11 November 2020 under archaeological consulting license P468 issued to Rhiannon Fisher of WSP by the MCM (P468-0065-2020). The investigation was directed by Sarah News (R485), as per Section 12 of the MCM's *Terms and Conditions for Archaeological Licenses,* issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act.*

The weather during the Stage 3 archaeological assessment was primarily sunny, and the details of each day are presented in Table 4 below. At no time were the weather or field conditions detrimental to the recovery of archaeological material.

Table 4: Weather Conditions during Stage 3 Archaeological Assessment of Location 3 (AiHb-375)

Date	Temperature	Weather
28 October 2020	11°C	Sunny
30 October 2020	1°C	Overcast with flurries
3 November 2020	5°C	Overcast
4 November 2020	16°C	Sunny
5 November 2020	17°C	Sun and cloud
9 November 2020	20°C	Sunny
10 November 2020	23°C	Sunny
11 November 2020	12°C	Sunny

Photographic images of the investigation are presented in Section 9.0, while the results are illustrated on Map 9 and in Tile 2 within the Supplementary Documentation.

All coordinates and elevations were collected with a Trimble Geo7x Global Navigation Satellite System (GNSS) unit using the UTM NAD 83 (Zone 17) datum and coordinated within the Cansel network (Can-Net) for base station references. The collected coordinates are provided as a six-digit easting with three decimal places, and a seven-digit northing with three decimal places. As the coordinates are a fixed spatial position, each survey observation can be considered a permanent and known datum point regardless of any future disturbance to the location of each observation. The GNSS receiver is a dual frequency differential GPS (DGPS) capable of real time kinematic (RTK) corrections within the Can-Net Virtual Reference Station (VRS) network. The collected coordinates provide real time accuracy between 1 to 3 centimetres.

Location 3 (AiHb-375) was relocated from the original Stage 2 assessment data. As the site was discovered through pedestrian survey, a partial controlled surface pickup (CSP) was conducted, recovering a representative sample of artifacts. A full CSP was conducted on 28 October 2020, prior to establishing the grid and excavation of Stage 3 test units (Image 1). The full CSP further confirmed the presence of three artifact concentrations within a slightly larger area identified in the Stage 2 archaeological assessment. The CSP confirmed that the three concentrations are within a 60 m (north-south) by 60 m (east-west) area. Artifacts collected through the CSP beyond these concentrations are considered outliers. The three artifact concentrations are located east, west, and south of an overgrown fieldstone rock pile and mature trees, on top of a knoll within the centre of site.

A 5 m by 5 m grid was established across the extent of the site as determined by the Stage 2 pedestrian survey and Stage 3 CSP (Map 9; Image 2). The grid squares are referred to by the intersection coordinates of their southwest corner. Each 5 m square set was further subdivided into 25 1 m square units, with sub-square number one located in the southwest corner of the 5 m square set, number five in the southeast corner, number six located immediately north of number one, and so on.

Through the Stage 2 assessment, Location 3 (AiHb-375) was identified as a large, plough-disturbed, historical Euro-Canadian site where it is not yet evident that Stage 4 mitigation impacts would be required. Given that Location 3 (AiHb-375) consisted of three artifact concentrations within a 60 m by 60 m area, the excavation of test units followed the Stage 3 strategy for large, plough disturbed sites. Excavation grids were placed over the three artifact concentrations with each grid consisting of one-metre square test units spaced at 5 m intervals (n=40) (*Section 3.2.3, Table 3.1, Standard 5, Government of Ontario 2011*). Additional test units were placed and excavated, amounting to 20% of each of the initial grid unit total, between the areas of concentration to document areas of lower concentration (n=8) (*Section 3.2.3, Table 3.1, Standard 6, Government of Ontario 2011*). Further additional units amounting to 10% of the initial grid unit total were placed on the periphery of the surface scatter to determine the site extent and examine the periphery (n=4) (*Section 3.2.3, Table 3.1, Standard 7, Government of Ontario 2011*) (Map 9).

The Stage 3 excavation grid for Location 3 (AiHb-375) consisted of 40 grid units, eight 20% infill units, and four 10% periphery units for a total of 52 Stage 3 test units across an area measuring approximately 65 m north-south by 65 m east-west (Map 9, Supplementary Documentation; Tile 2). Each 1 m square test unit was excavated to topsoil-subsoil interface (Images 3-5, 7, 12-13, 16). The subsoil surface of each unit was shovel shined and examined for evidence of subsurface cultural features prior to excavation to a depth of 5 cm into the subsoil. All soil was screened through 6 mm hardware cloth to facilitate the recovery of small artifacts. Three possible cultural features were encountered during the Stage 3 of Location 3 (AiHb-375) (Images 4, 6 and 11). All features were recorded before being covered with geotextile and backfilled. All other Stage 3 test units were backfilled upon completion (Image 10, 17-18). Potential feature descriptions can be found in Section 3.2 while their locations are depicted on Map 9.

Soils at Location 3 (AiHb-375) were light to medium brown sandy clay loam topsoil over yellow-brown sandy clay loam subsoil (Images 8-9). Nine units on the west side of site, exhibited light to medium brown sandy clay loam topsoil over grey sandy silt subsoil (Images 14-15). The depth of the Stage 3 units ranged from 20 to 70 cm. Unit counts ranged from 4-1005 artifacts.

All excavated artifacts were recorded with reference to their unit provenience and retained for laboratory analysis and description, as per Section 6.0 of the *Standards and Guidelines* (Government of Ontario 2011). A field log was maintained for the duration of the investigations detailing pertinent information and digital photographs were taken of the surveyed areas and topography. Map 9 illustrates the Stage 3 excavation results as well as a photographic key.

3.0 STRATIGRAPHY AND CULTURAL FEATURES

3.1 Stratigraphy

The Study Area surrounding Location 3 (AiHb-375) consisted of ploughed agricultural fields. The stratigraphy encountered at Location 3 (AiHb-375) was consistent across the entire site, except for nine units that exhibited a subsoil variant. The typical stratigraphic sequence encountered consisted of light to medium brown sandy clay loam topsoil (Lot 1) over yellow-brown sandy clay loam subsoil (Lot 2) (Images 8-9). The depth of these Stage 3 units ranged from 20-70cm. Both the topsoil and subsoil lots had a high amount of rock inclusions. The subsoil variant encountered within the aforementioned nine test units include light to medium brown sandy clay loam topsoil over grey sandy silt subsoil (Images 14-15). These nine test units were located on the western concentration of the site, on and at the bottom of a slope and varied in depth from 20-40 cm.

3.2 Cultural Features

Three potential subsurface cultural features were observed at Location 3 (AiHb-375). Upon observation, each feature was cleaned for observation and recorded before being covered with geotextile and backfilled. A conservative approach and cautionary methods were applied when identifying potential features. Thus, all stains identified during the Stage 3 Archaeological Assessment of Location 3 (AiHb-375) were recorded as potential features.

Potential Feature 1 was found in test unit 80E 100N:1, 20 cm below the surface, within subsoil. The soil strata defined as feature fill (Lot 3) encompassed the northeast corner of the unit and consisted of dark brown to black sandy clay loam, with charcoal inclusions (Image 4). A light yellow-brown sandy clay loam inclusion was identified along the western limit of excavation. The remaining areas of 80E 100N:1 exhibited sterile subsoil (Lot 2). Few artifacts (n=29) were recovered from the surface of potential Feature 1. Feature 1 was interpreted as a possible burn pit or refuse deposit and is likely related to the historic occupation or modern land-use of the site.

Potential Feature 2 was found in test unit 85E 60N:1, 25 cm below the surface. The soil strata defined as feature fill (Lot 3) encompassed the majority of the unit floor and consisted of dark brown sandy clay loam, with charcoal and ash inclusions (Image 6). Subsoil was identified in the northeast corner of the unit. The feature fill also exhibited high rock content. Few artifacts (n=35) were recovered from the surface of potential Feature 2. Feature 2 was interpreted as a possible burn pit or refuse deposit and is likely related to the historic occupation or modern land-use of the site.

Potential Feature 3 was found in test unit 90E 80N:1, 37 cm below the surface. The soil strata defined as feature fill (Lot 3) encompassed the east half of the unit and consisted of a dense artifact concentration and dark brown to black sandy clay loam (Image 11). The west half of the unit exhibited typical subsoil encountered on site (Lot 2). The feature fill also exhibited high rock inclusions.

Potential Feature 3 is also associated with the recovery of approximately 990 artifacts, mostly ceramics (n=694), but also glass (n=87), metal (n=133) and bone artifacts (n=75). Further, the units clustered around Potential Feature 3 produced high artifact yields as well, with approximately 800 artifacts north, approximately 700 artifacts to the northeast, and approximately 360 artifacts to the east. Based on the high artifact yields surrounding Potential Feature 3 and the site residing within a plough zone, which disturbed and redistributed the artifacts, the recovered artifacts are consistent with the interpretation that Potential Feature 3 is a pit feature of historic affiliation and is associated with the activity centre of the site.

4.0 RECORD OF FINDS

The Stage 3 archaeological assessment was conducted employing the methods described in Section 2.0. Map 9 and Tile 2 within the Supplementary Documentation illustrate the areas assessed and the methods employed, while Images 1 to 18 illustrate the conditions during the Stage 3 assessment. The UTM coordinates are listed in the Supplementary Documentation that accompanies the report separately.

The Supplementary Documentation also contains mapping showing the specific locational information of Location 3 (AiHb-375).

Table 5 provides an inventory of the documentary record generated in the field. Images 19 – 33 illustrate a representative sample of the Stage 3 recovered artifacts.

All artifacts recovered from this assessment are contained in three banker's boxes and will be temporarily housed at WSP's Whitby office until formal arrangements can be made for their transfer to an MCM collections facility. A complete catalogue of all artifacts recovered during the Stage 3 archaeological assessment of the site is contained within Appendix A of this report.

Table 5: Inventory of Documentary Record

Document Type	Current Location of Document	*Additional Comments*
Field Notes	WSP office in Whitby	16 pages in original field book and stored to WSP server
Hand Drawn Maps	WSP office in Whitby	5 hand drawn maps stored to WSP server
Maps Provided by Client	WSP office in Whitby	1 map stored to WSP server
Digital Photographs	WSP office in Whitby	211 photographs stored to WSP server

4.1 Location 3 (AiHb-375)

The Stage 3 archaeological assessment of Location 3 (AiHb-375) resulted in the recovery of 6,839 artifacts from 52 test units and the CSP including 6,347 Euro-Canadian artifacts, 475 faunal elements, 16 pre-contact Indigenous artifacts and one piece of recent material.

A summary of the recovered artifacts is presented in Table 6 and each artifact class will be discussed in greater detail below.

Table 6: Location 3 (AiHb-375) Stage 3 Recovered Artifacts

	Artifact	Freq.	% Total
Euro-Canadian Historic	Food/Beverage	4,660	68.14
	[Ceramic]	*[2,913]*	*[42.59]*
	[Utilitarian]	*[1,425]*	*[20.84]*
	[Glass]	*[319]*	*[4.66]*
	[Utensils]	*[3]*	*[0.04]*
	Structural	1,565	22.88
	[Ceramic]	*[114]*	*[1.67]*
	[Glass]	*[567]*	*[8.29]*
	[Metal]	*[581]*	*[8.50]*
	[Miscellaneous]	*[303]*	*[4.43]*
	Personal/Societal	118	1.73
	Animal Husbandry	4	0.06
Total EHC		6,347	92.81

	Artifact	Freq.	% Total
Pre-Contact Indigenous	Chipping Detritus	14	0.20
	Projectile Point	2	0.03
Total PCI		16	0.23
20th Century Material	Plastic	1	0.01
Total 20th Century Material		1	0.01
Faunal	Mammalian	472	6.90
	Avian	3	0.04
Total Faunal Material		475	6.95
Total Stage 3 Artifacts		**6,839**	**100.00**

4.1.1 Euro-Canadian Material

The historical Euro-Canadian artifact assemblage from Location 3 (AiHb-375) included 4,660 food and beverage related items, 1,565 structural artifacts, 581 metal artifacts, 118 personal/societal related artifacts, four pieces of horse tack, and one miscellaneous/recent artifact.

4.1.2 Faunal Material

A total of 475 faunal elements were recovered from Location 3 (AiHb-375), 472 of which were identified as mammalian. The remaining four faunal remains recovered were identified as avian.

4.1.3 Pre-Contact Indigenous

A total of 16 pre contact Indigenous artifacts were recovered from Location 3 (AiHb-375). Of the total lithic assemblage, 14 artifacts were identified as chipping detritus while the other 2 artifacts were identified as projectile points. All of the chipping detritus was manufactured on Onondaga chert. The chipping detritus consisted of eight tertiary flakes, three broken flakes, two pieces of till chert, and one secondary flake (Image 32).

A total of two projectile points, both produced from Onondaga chert, were recovered during the Stage 3 assessment of Location 3 (AiHb-375) (Image 33). Section 5.1.2 provides further detail regarding the projectile points.

5.0 ANALYSIS AND CONCLUSION

5.1 Location 3 (AiHb-375)

Location 3 (AiHb-375) yielded predominately historical Euro-Canadian artifacts, as well as a small amount of pre-contact Indigenous artifacts. A total of 6,839 artifacts were recovered, which included historical Euro-Canadian artifacts (n=6,347), faunal material (n=475), pre-contact Indigenous (n=16), and 20th century material (n=1). During the assessment, three potential cultural features likely related to the historical Euro-Canadian assemblage or modern use of the property were identified; descriptions of these features may be found in Section 3.2.

Based on the artifact assemblage, Location 3 (AiHb-375) dates primarily from the mid- to late-19th century . The site is located adjacent to an extant homestead and is distributed over an area measuring approximately 60 m north-south by 60 m east-west.

5.1.1 Historical Euro-Canadian Component

As described in Section 4.1.1, the historical Euro-Canadian assemblage of Location 3 (AiHb-375) is predominately comprised of food and beverage related items (68.14% of total assemblage) while structural related artifacts (22.88% of total assemblage), and personal/societal (1.73% of total assemblage) make up the remainder of the assemblage. Dateable material for each artifact class is discussed in further detail below.

5.1.1.1 Food and Beverage

A total of 4,338 food and beverage related artifacts were recovered during the Stage 3 assessment of Location 3 (AiHb-375). Table 7 provides a breakdown of the ceramic assemblage by ware type while Table 8 provides a breakdown of the ceramic assemblage by decorative type.

Table 7: Location 3 (AiHb-375) Stage 3 Recovered Ceramics by Ware Type

Ceramic	Freq.	%
Refined White Earthenware (RWE)	1,477	34.05
Utilitarian	1,425	32.85
Vitrified White Earthenware (VWE)	1,012	23.33
Indeterminate	361	8.32
Yellowware	58	1.34
Redware	3	0.07
Pearlware	2	0.05
Total Stage 3 Ceramics	**4,338**	**100**

Table 8: Location 3 (AiHb-375) Stage 3 Recovered Ceramics by Decorative Type

Ceramic	Freq.	%
Coarse Red Earthenware	1387	31.97
Vitrified White Earthenware, plain	963	22.20
Refined White Earthenware, plain	946	21.81
Indeterminate	361	8.32
Refined White Earthenware, transfer print	214	4.93
Refined White Earthenware, painted	164	3.78
Refined White Earthenware, sponged	91	2.10
Yellowware, plain	50	1.15
Refined White Earthenware, edged ware	40	0.92
Stoneware	38	0.88
Vitrified White Earthenware, moulded	33	0.76
Vitrified White Earthenware, transfer print	14	0.32
Refined White Earthenware, banded	10	0.23
Yellowware, banded	8	0.18
Refined White Earthenware, stamped	7	0.16
Refined White Earthenware, flow transfer	4	0.09
Redware, plain	3	0.07
Vitrified White Earthenware, edged ware	2	0.05
Pearlware, edged ware	2	0.05
Refined White Earthenware, moulded	1	0.02
Total Stage 3 Ceramics	**4,338**	**100.00**

White Earthenwares

A total of 1,477 pieces of Refined White Earthenware (RWE) were recovered from Location 3 (AiHb-375), representing 34.05% of the ceramic assemblage for the site (Image 24). RWE is slightly porous, white-pasted earthenware with a near colourless glaze first developed in 1805 and began to replace earlier near-white ceramics, such as creamware and pearlware, by the early 1830s. Its use continued throughout the 19th century, and is still used today, but its popularity began to decline by the 1840s with the introduction of vitrified white earthenware (Adams et al 1994; Miller et al 2000). 946 fragments of RWE were plain/undecorated, comprising 21.81% of the ceramic assemblage.

During the 19th century, the technique of transfer printing designs to the underglaze surface of clay ceramics revolutionized the British ceramic industry. Manufacturers were now able to apply intricate patterns quickly and rather inexpensively, allowing for more uniformity between vessels (Samford 1997). Transfer print as a ceramic decoration began in 1750s and was developed by John Sadler and Guy Green of Liverpool. It was then adopted by Josiah Wedgwood who used it on his Creamware. Transfer printing is a process by which a pattern or design is etched onto a copper (or other metal) plate. The plate is then inked, and the pattern is "transferred" to a special tissue. The inked tissue is then laid onto a bisque fired ceramic item, glazed, and fired again (Samford 1997; MACL 2002). Prior to 1829, most transfer printed wares were blue, but after 1830, colours such as light blue, brown, black, sepia, green, red, and mulberry became more common (Collard 1967; Coysh and Henrywood

1982:10). From about 1850 to 1890 only the colours blue, black, and brown are common, while in the 1890s and later a wide variety of colours were in use (Adams *et al.* 1994:101). At Location 3 (AiHb-375) 214 pieces of transfer printed RWE were decorated with transfer print and colours included blue (n=147), brown (n=32), black (n=14), purple (n=9), green (n=9), pink (n=2) and red (n=1) which comprised 4.93% of the ceramic assemblage.

A total of 164 pieces of painted RWE were recovered during the Stage 3 assessment of Location 3 (AiHb-375). As the name suggests painted RWE had its decorative motifs applied by an artisan using a small brush who painted the pattern directly onto the object. Painted wares can be distinguished from other decorative techniques because the brush strokes are visible in the artwork. Early palette polychrome painted wares, which included floral scenes in muted brown, yellow, and green, with sparse use of blue, was popular from approximately 1795 until around 1815 (MACL 2015). Polychrome painted wares, which included floral scenes in muted brown, yellow, and green, with increasing use of blue, were common from approximately 1815 until the 1830s (Miller 1991, MACL 2015). Late palette paints for white-bodied ceramics, including brighter shades of yellow and green, as well as red, became popular after the 1830s (Miller 1991). The pieces recovered from this site were decorated predominately with floral patterns in blue and polychrome late palette colours. The use of underglaze red paint is further evidence that these ceramic pieces are of post-1829 whitewares (Miller et al. 2000, MACL 2015).

Sponged wares were created by applying glaze to vessels with a sponge, generally in association with a painted pattern. These wares were common from the 1820s to the 1860s, but most popular in the 1830s (MACL 2002). Twelve RWE sherds exhibited sponge decoration in the colours blue (n=86), pink and green (n=2), purple (n=1), pink (n=1), and green (n=1).

A total of 40 pieces of blue edged RWE were recovered from Location 3 (AiHb-375) including 32 pieces with unscalloped rims, with impressed repeating pattern of incised curved lines, and eight scalloped rims with impressed repeating pattern and a feathered band of blue (Miller et al. 2000). White earthenware plates and other tableware were often decorated with moulded rim motifs that were usually painted under the glaze in blue or green, and occasionally red (Miller 1991). This method of decoration, simply referred to as ‘edged’ by 19th century potters, was first introduced in the 1770s. By the 1840s, green edged wares became rare, while blue edged wares remained popular into the 1860s and continued to be available for purchase well into the 1890s and possibly later (Miller 1991).

Industrial slipped wares are produced by mechanized slip decorating introduced in the 18th century. Industrial slip is known by a number of other names, many referring to a specific type of decoration, rather than the decoration group as a whole. Banded wares were decorated with horizontal bands of coloured slip applied in varying widths. Banding colours are predominantly muted earth tones including, black, green, brown, orange, yellow, grey, and pale blue. Banded patterns can be found on white earthenwares from about 1830 through the 20th century and occurred both as a primary decorative element and in conjunction with other design elements such as cabling or ‘finger trailing’ found on mocha ware after 1836 (Sussman 1997). Examples from the first half of the century are fairly elaborate with multiple colours, while most banded wares from the last half of the century tend to be plainer, often consisting of nothing but bands of blue slip (Adams *et al.* 1994:101). Cable designs on white earthenwares were made using a multi-chambered slip cup that could deliver several colours of slip to the vessel at the same time. The first specific reference to this type of decoration appears in the mid-1830s (Sussman 1997). Mocha decoration, also known as “dendritic,” was produced by the application of an acidic solution to the vessel after the slip had been applied, which spread into fern-like patterns. Although this type of decoration does appear on yellowware in the early 19th century, most mocha patterns on yellowware date after 1860 (MACL 2015). Banded wares at Location 3 (AiHb-375) comprise 0.23% of the ceramic assemblage (n=10).

Stamp decorated wares are created by dipping a cut sponge shape into glaze and applying it to a vessel. Stamped or cut sponged patterns were introduced in the 1840s. Patterns included stars, diamonds, scrolls, and daggers, flowers, various geometric shapes, birds, and animals (MACL 2008). Stamped whitewares were common from around 1845 to 1930 (Miller 2000). Seven stamped RWE sherds were recovered depicted sponged decoration and comprised 0.16% (n=7) of the ceramic assemblage.

A total of four pieces of flow transfer printed RWE were recovered from Location 3 (AiHb-375). Flow transfer printed wares are created in the same manner as transfer printed wares, the only difference being, the pigment is allowed to smudge and flow over the vessel, creating a muted appearance to the applied pattern. Blue was the first colour experimented with and began to be imported to North America after 1845 (Miller et al. 2000). The recovered pieces were all decorated in blue of indeterminate pattern.

Tableware with moulded designs became popular when the first raised-grain pattern was patented by Minton & Company in 1848. Many imitations and other patterns followed as moulded designs gained popularity (Sussman 1985). One RWE sherd depicted moulded designs, comprising approximately 0.02% (n=1) of the ceramic assemblage.

Vitrified white earthenware (VWE) also known as white granite, graniteware, white stone ironstone, or simply ironstone is a variety of white bodied earthenware with a white to greyish-white fabric that is usually thick and heavy beneath a thick, hard clear glaze with a white, greyish or bluish tint. VWE was first developed in the 1840s but did not become popular until the second half of the 19th century. Its popularity continued into the 20th century, and it is still in use to some extent today (MACL 2015a). A total of 1,012 pieces of VWE were recovered from Location 3 (AiHb-375) representing 23.33% of the ceramic assemblage for the site, 963 of which were plain and undecorated (Images 22, 23 and 27).

VWE is often decorated with raised moulded designs. The most popular and enduring of these was the “wheat” or Ceres, pattern, which in addition to other harvest or grain motifs, was popular from the 1860s to the turn of the 20th century (Sussman 1985). Other common moulded motifs include foliage, geometric, paneled/scalloped, classical, and ribbed. Broadly speaking, up until the 1870s, potters produced wares with detailed molding or sharp angles. After this period, the use of moulded motifs decreased or disappeared, and vessel lines became simpler (Wetherbee 1996:10). The 25 moulded fragments (Image 23) recovered from Location 3 (AiHb-375) identified by the Wheat Pattern.

Fourteen pieces of VWE were transfer printed. Eight pieces were blue with a geometric pattern, four pieces were brown, one with “…FLO…” and indeterminate pattern, and one with a landscape pattern. Two pieces were black with a floral pattern.

The remaining two pieces of VWE were blue edged with an unscalloped rim, blue feathering, and incised repeating curved lines.

Utilitarian

A total of 1,387 pieces of coarse red earthenware fragments were recovered during the Stage 3 assessment of Location 3 (AiHb-375) representing 31.97% of the ceramic assemblage for the site (Image 28). Coarse red and yellow earthenware vessels were manufactured throughout the late 18th and 19th centuries and were the most common utilitarian ware in the first half of the 19th century and continues to be produced today (Adams *et al.* 1994). This ware type is generally somewhat porous and hard, and orange to red in colour. As it is quite porous, glaze is needed for the vessel to hold liquid contents.

38 stoneware sherds are finished with Albany slip, which is a varying brown slip originally created from alluvial clays in New York. It has since come to refer to any dark brown or black slip. Albany slip was invented in the early 19th century; however, it did not become widespread and popular until the mid- to late-19th century (MACL 2015b).

Indeterminate

A total of 361 ceramic pieces recovered from Location 3 (AiHb-375) representing 8.32% of the ceramic assemblage, could not be catalogued into specific ceramic-ware classifications. These pieces are so heavily damaged and fragmentary that it is impossible to accurately identify them by ceramic type. To avoid altering the separate ceramic totals, percentages, and ultimately the temporal data for the site the damaged pieces were simply classified as miscellaneous unidentified ceramics.

Yellowware

A total of 58 pieces of yellowware were recovered during the Stage 3 assessment of Location 3 (AiHb-375), consisting of 2.4% of the ceramic assemblage (Image 25). Yellowware is earthenware made from naturally coloured buff/yellow clay, covered with a clear glaze dating from 1830 to 1940 (Miller 2000), with its peak popularity after 1850 (Burke 1991). Determining the temporal date range for yellowware can be determined through the decoration type, as yellowware does not typically bear maker's marks (Samford 2014). Decoration can include industrial slip, mocha, Rockingham glazes, oxide washes/flint enamels and molding (MACL 2015). Many of the yellowware slip decorations consist of multiple thin bands encircling the exterior of the vessel, with white, blue, and brown being the most commonly used colours (Samford 2014). Combinations of brown and white, blue, and brown, and blue and white are present in the ceramic assemblage from Location 3 (AiHb-375), suggesting a temporal date rage of approximately mid to late 19th century into the 20th century. Yellowware decoration at Location 3 (AiHb-375) included plain/undecorated (n=50), and industrial slip (n=8).

Pearlware

A total of two pieces of pearlware were recovered during the Stage 3 assessment of Location 3 (AiHb-375). Pearlware, sometimes referred to as "China glazed," is a variety of earthenware that was popular from 1780 to 1840 (Samford 2014). Pearlware is often difficult to recognize because of its similar appearance to later whiteware ceramics, however because of the addition of cobalt, the glaze has a light blue to blue-green tint. When placed on white earthenware bisque, this glaze gave the impression of a "whiter" ware than the earlier yellow tinted creamware. Both blue and green edged wares were popular in the late 18th and early 19th centuries with green edged wares declining in popularity post 1830. (Miller et al. 2000). Of the two-edged ware pieces recovered, both were blue with a thin blue feathered band, one with repeating incised curved lines, and the other with an incised rosebud.

Redware

A total of three pieces of redware were recovered from Location 3 (AiHb-375) (Image 26). Redware is a thin bodied earthenware covered on both the interior and exterior by a dark reddish-brown, dark brown or black glaze. This type of redware was commonly used in the early 19th century for tea pots and mugs. All the recovered pieces are black glazed (Image 27).

5.1.1.2 Domestic: Glass Artifacts

A total of 319 non-structural glass artifacts were recovered from the Stage 3 assessment of Location 3 (AiHb-375); 295 shards of bottle glass, 17 chimney lamp fragments, two glass dishes, two drinking vessels, one jar, and one stopper. Colours of bottle glass (including pharmaceutical glass) include aqua, green, and olive/black.

Bottle glass colour is extremely limited with regards to providing a temporal sequence for a site; however, olive glass where the addition of iron when making glass was customary practice up until 1860 and produced dark olive or dark amber glass that became known as “black glass” (Kendrick 1971).

Of the 17 chimney lamp fragments recovered at Location 3 (AiHb-375) two fragments exhibited a beaded rim. Though the first open-flame lamp with a glass cylinder protecting the flame was patented in 1784, glass lamp chimneys do not appear in significant quantities until the widespread use of kerosene lamps around the 1860s. Machine crimped lamp chimney rims were patented in the United States in 1877, and the first machine to produce beaded lamp chimney rims was patented in 1883. Despite this, decorated rims on lamp chimneys in Canada appear rare before around 1885 (Woodhead, Sullivan, and Gusset 1984).

Three bottle finishes were recovered from Location 3 (AiHb-375) (Image 21): one aqua Packer finish (1860s – 1870s), one aqua Patent finish (1840 – 1900’s), and one indeterminant finish (Lindsay 2019).

5.1.1.3 Structural Artifacts

A total of 1,565 (22.88% of the overall assemblage) structural artifacts were recovered during the Stage 3 assessment of Location 3 (AiHb-375). The recovered artifacts include 567 window glass shards, 539 machine cut nails, 114 red brick fragments, 27 hand wrought nails, seven wire drawn nails, two pieces of mortar, one screw, and one undetermined nail.

The recovered nail assemblage includes predominately machine cut nails as well as hand wrought, and wire drawn nails (Image 30). Wrought nails are identifiable due to their multi-faceted heads, often referred to as “rose bud,” as well as the square profile of the shank of the nail which tapers into a four-sided point. Wrought nails were the most commonly used nail in Upper Canada until about 1830 when machine cut nails began to replace them. Machine cut nails were cut from a sheet of metal and have a flat head. They were in use as early as 1790 but did not become common in Ontario until 1830 (Noel Hume 1976). Wire drawn nails are identical to the type of nails in current use today, with a flat, round head and a wire shaft. Wire drawn nails became popular in the 1890s.

5.1.1.4 Faunal Remains

A total of 476 faunal remains were recovered during the Stage 3 assessment of the Location 3 (AiHb-375), 472 of which were identified as mammalian, showing signs of human activity through butchering; cutmarks evident on one fragment, and calcination. The remaining four faunal remains recovered were identified as avian.

5.1.1.5 Metal Artifacts

A total of 303 metal artifacts were recovered during the Stage 3 assessment including 290 pieces of miscellaneous metal, seven pieces of fence wire, and six pieces of miscellaneous metal hardware (Image 30).

5.1.1.6 Personal Artifacts

A total of 118 personal artifacts were recovered during the Stage 3 assessment of Location 3 (AiHb-375) including 56 white clay pipe bowls, 44 white clay pipe stems, seven buttons, five fragments of leather shoes, two buckles, two fragments of slate pencils, one glass bead, and one umbrella piece (Image 19 and 20).

Smoking Paraphernalia

White clay pipes were very popular throughout the 19th century but declined in use during the 1880s with the introduction of briar pipes and cigarettes (Adams et al. 1994). Most white clay pipes found in Upper Canada were manufactured in either Quebec or Scotland, occasionally examples from English, Dutch, French, and American makers are also found. Sometimes the maker’s name and/or city of manufacture was impressed on one side of the pipe stem, a practice which did not become popular until the 1840s (Adams et al. 1994). Of the white clay

smoking pipe fragments, three maker's marks were discernable including, two 'Murray Glasgow' fragments (1833-1861), one 'Bannerman Montreal' fragment (1888-1907) (Bradley 2000:117) and one "White/…dinburgh" fragment which is likely "Tho. White & Co. Edinburgh" (1847-1876) (Walker 1971) (Image 20). Eleven bowl fragments did have some evidence of decoration but could not be fully identified.

Buttons

Of the recovered seven buttons, three were metal, two were agate, one was bone, and one was shell (Image 19).

In the first quarter of the 19th century metal coat buttons were usually flat discs with a metal eye soldered on the back. Often words like "best gilt" or some other profession of quality are impressed on the back (Adams et al. 1994). Another metal button type is a disc, usually with four holes, used for suspenders and undergarments similar to the bone buttons discussed below (Adams et al. 1994). The three recovered buttons were medium in size, with two holes for sewing attachment. One of the metal buttons recovered has a fillagree pattern around the outside of the button face.

Agate buttons were made from pressed ceramic powder manufactured by the "Prosser" process patented in 1840. They became popular in Upper Canada beginning in the late 1840's. Agate buttons which are often confused with white glass buttons are distinguishable due to the dimpled appearance present on the back of the button which is a result of the moulding process (Adams et al. 1994:96). The recovered agate buttons were the common small to medium sized, white. One was four-holed type with a slightly concave face, one was broken.

Bone Buttons, often simply turned discs with 4 holes, were commonly used in the 19th century for underclothing. Typically, 1 to 2 cm in diameter, bone buttons often retain the wood-like grain of the bone and so are sometimes misidentified as wood. By the last quarter of the 19th century bone buttons began to be replaced by those made of "vegetable ivory", a substance obtained from the shell of a large tropical nut. Vegetable ivory is a material usually not well preserved in archaeological sites (Adams et al. 1994). The recovered bone button was medium in size.

Shell or "pearl" buttons, fashioned from discs of fresh-water or sometimes even exotic tropical shells, were often used as shirt buttons, especially before the development of the much less expensive "agate" button in the 1840s. By the 1890s, there were over 200 factories in London and 4000 to 5000 people employed in Birmingham producing buttons (Llewellyn-Jones 2003). The industry greatly declined in the first half of the 20th century with the impact of over-fishing pearl shell and the cessation of imports of pearl shells during the World Wars (Llewellyn-Jones 2003). The one recovered shell button was one small (9.52mm in diameter) with four holes and for sewing attachment.

5.1.1.7 Animal Husbandry

A total of four horseshoe nails were recovered from Location 3 (AiHb-375).

5.1.1.8 Utensils

The recovered utensil fragments included a fragment of a fork shaft with a broken three-tined head and two utensil tangs (Image 31).

5.1.1.9 Miscellaneous/Recent Material

A total of one recent material artifact was recovered from Location 3 (AiHb-375) which is comprised of a single piece of indeterminate plastic.

5.1.2 Lithic Artifacts

A total of 16 pieces of chipping detritus were recovered from Location 3 (AiHb-375). Chipping detritus was the waste product from the production of lithic tools and is the most commonly recovered artifact on pre-contact Indigenous archaeological sites in southern Ontario. All of the chipping detritus was manufactured on Onondaga chert and included eight tertiary flakes, three broken flakes, two pieces of till chert, and one secondary flake (Image 32).

A total of two projectile points, both produced from Onondaga chert, were recovered during the Stage 3 assessment, and are described in Table 9 below and illustrated in Image 33. One broken projectile point was identified to be a terminal archaic point, while the other could not be identified beyond being a projectile point due to the break.

Table 9: Location 3 (AiHb-375) Stage 3 Recovered Formal Lithic Tools

Tool	Cat. No.	Material	Length	Width	Thickness
Projectile Point	276	Onondaga	29.73* mm	19.53 mm	4.77 mm
Projectile Point	506	Onondaga	20.38 mm	23.19* mm	5.97* mm

* indicates an incomplete measurement due to break.

5.1.3 Conclusions

The recovered pre-contact Indigenous artifacts suggests prior to the occupation of this lot by Euro-Canadian settlers, the land was utilized by pre-contact Indigenous peoples. The pre-contact Indigenous material recovered does not trigger further archaeological assessment based on the frequency in which it was recovered over multiple units.

Overall, the artifact assemblage suggests a mid- to late-19th century domestic historical Euro-Canadian occupation of Location 3 (AiHb-375). A total of 3,167 artifacts from the assemblage are temporally diagnostic (49.9% of the total assemblage). The artifact assemblage includes artifacts that date from the early, mid- and late 19th century, with most of the artifacts dating from the mid- to late 19th century (Table 10, Section 5.1.1). These finds are consistent with the conclusions of the Stage 2 artifact assemblage from Location 3 (AiHb-375) (Golder 2019).

Table 10: Location 3 (AiHb-375) Dateable Artifacts.

Artifact	Frequency	% of Total Assemblage	% of Dateable Assemblage	Popularity
Early 19th Century Artifacts				
Wrought Nail	27	0.43%	0.86%	Pre-1830
Pearlware	2	0.03%	0.06%	Pre-1840
Subtotal	**29**	**0.46%**	**0.92%**	**n/a**
Mid-19th Century Artifacts				
Machine-Cut Nails	539	8.49%	17.01%	~1830-1860
RWE	1477	23.27%	46.6%	~1830s+
Yelloware, Plain/Banded	58	0.91%	1.83%	~1840s+
Redware	3	0.05%	0.09%	~1830-1860
Murray Pipestem	1	0.02%	0.03%	~1830-1861
Patent finish	1	0.02%	0.03%	~1840-1900
Subtotal	**2079**	**32.7%**	**65.6%**	**n/a**

Artifact	Frequency	% of Total Assemblage	% of Dateable Assemblage	Popularity
Late 19th Century Artifacts				
Wire-Drawn Nails	7	0.10%	0.22%	~1850s+
VWE	1012	14.8%	32%	~1840s+
Stoneware, Salt Glaze/Albany Slip	38	0.56%	1.2%	~1860s+
Packer Finish	1	0.02%	0.03%	1860s-1870s
Prosser (Agate) Button	1	0.02%	0.03%	Late 1840s+
Subtotal	**1059**	**16.7%**	**33.45%**	**n/a**
20th Century Artifacts				
Plastics	1	0.02%	0.03%	1900s+
Subtotal	**1**	**0.02%**	**0.03%**	**n/a**
GRAND TOTAL	**3167**	**49.9%**	**100.00%**	**n/a**

The most strongly represented class of artifacts is the domestic class, followed by the structural class, which is a common distribution found on 19th century domestic sites. Of the 573 nails collected from Location 3 (AiHb-375), 94.1% (n=539) are classified as machine cut, 4.7% (n=27) are classified as wrought, 1.2% (n=7) are classified as wire drawn, 0.7% (n=4) are classified as horseshoe, and one nail was indeterminant. Therefore, the nail assemblage strongly suggests the site postdates 1830, as machine cut nails became common in southern Ontario in the 1830s. Wire nails were not available until the 1850s and the use of machine cut nails continued in rural areas well into the later half of the century and had considerable overlap with wire drawn varieties (Nelson 1968; Phillips 1994).

The ceramic analysis of the site suggests a main occupation date between 1840s and 1870s, though areas of the property were occupied into the late 19th century. Table 11 further breaks down the dateable ceramics. There are only two pieces of ceramic (pearlware) dating to the first half of the 19th century. Considering this small sample, these pieces could indicate a family heirloom transported to the property upon settlement rather than inferring that these ceramics were obtained by the homesteaders during some period of earlier settlement prior to 1830.

The RWE ceramic artifact assemblage includes a variety of decoration ware types that further supports the mid to late 19th century occupation. RWE transfer print ceramics include mostly blue, black and brown transfer prints and account for 90% (n=193) of the transfer print assemblage. These colours of blue (n=147), brown (n-32) and black (n=14) had a peak production between 1850 and 1890, suggesting a mid- to late-19th century date range (Miller et al. 2000). Other examples of RWE ceramics dating to the first half of the 19th century include RWE with sponged motif (n=91), stamped decorative motifs (n=7) and edged decorative motifs (n=40). The VWE ceramic assemblage consists mostly of plain (n=963), with some wheat pattern moulded decorative motifs (n=33), transfer print (n=14), and edged (n=2). These wares had peak production dates from the 1840s until the 20th century.

The strong representation of RWE, accounting for 34.05% (n=1477) of the ceramic assemblage, and VWE accounting for 23.33% (n=1012) of the ceramic assemblage, as well as a lack of later ceramic ware types from the second half of the 19th century such as porcelain, supports the established 1840s to 1870s date range.

Table 11: Location 3 (AiHb-376) Dateable Ceramic Artifacts.

Ceramic Decoration Type	Freq.	Date	Reference
Vitrified White Earthenware, plain	963	1840s+	MACL 2015a
Refined White Earthenware, plain	946	1820s+, popularity declined in 1840s	Adams et al. 1994
Refined White Earthenware, transfer print	214	1820s+, most popular 1850-1890	Collard 1967; Coysh and Henrywood 1982
Refined White Earthenware, painted	164	1830-1850	Miller 1987
Refined White Earthenware, sponged	91	1820-1860, most popular 1830s	MACL 2002
Yellowware, plain	50	1830-1940, most popular 1840s	Samford 2014
Refined White Earthenware, edged ware	40	1813-1857	Miller et al. 2000
Stoneware	38	1800-1900, most popular 1850s+	MACL 2015b
Vitrified White Earthenware, moulded	33	1840s+, most popular 1860-1870	Wetherbee 1996; Sussman 1985
Vitrified White Earthenware, transfer print	14	1850s+	
Refined White Earthenware, banded	10	1830s+	Adams
Yellowware, banded	8	1840s+	
Refined White Earthenware, stamped	7	1840-1930	Miller 2000
Refined White Earthenware, flow transfer	4	1840-1900, common after 1845	Miller 2000
Redware, plain	3	1830-1900, commonly used early 19th c	1830-1900
Vitrified White Earthenware, edged ware	2	1840s+	
Pearlware, edged ware	2	1795-1850	1795-1850
Refined White Earthenware, moulded	1	1848+	Sussman 1985
Total Stage 3 Ceramics	**2590**		**n/a**

The assemblage recovered during the Stage 3 assessment is consistent with the assemblage recovered during the Stage 1-2 archaeological assessment, suggesting that the earlier conclusion of a mid- to late-19th century time of occupation is correct. Further, there is almost no material recovered that broadened the date range significantly, save for one recovered piece of plastic. Evidence of early 19th century material exists in only very small frequencies on the site. This suggests that the integrity of the site is good, with any disturbance arising as a result of agricultural activities rather than more intensive modern land use practices or development.

Additional artifacts recovered from the Stage 3 assessment support conclusions drawn during the Stage 1-2 assessment though additional background research has indicated that James Hogg was not the first occupant on the land. The assemblage most likely relates to a mid to late 19th century occupation, that continued into the 20th century. The assemblage could be tied to the earlier occupation by Charles Evans and his family in 1851 or by the Hogg family after 1851. Domestic glass consisted of mostly dark olive/black glass, olive, aqua and clear. While bottle glass colour is limited with regards to providing the temporal sequence for a site, dark olive/black

glass was most common until 1860 (Kendrick 1971). The bottle finishes consist of an aqua packer bottle, which dates to the 1860s to 1870s, and the one aqua patent finish indicates a date range of the 1840s to 1900s. The two pieces of beaded lamp chimney glass would have been produced sometime after 1877, though the remaining chimney glass is undecorated and would have been popular around the 1860s . Most of the smoking paraphernalia did not have discernable maker's marks, but there were two pipe fragments with "Murray Glasgow", produced sometime between 1833-1861, and one 'Bannerman Montreal' pipe stem fragment was recovered from site that would have been produced sometime after 1888. While there is evidence of material from the late 19th century, most of the artifact assemblage suggests an occupation period of the mid- to late- 19th century.

To further narrow down a date of occupation for Location 3 (AiHb-375), archival research and broader trends in the 19th century consumer goods were examined.

As outlined in Section 1.3.3.2, the portion of the Study Area where Location 3 (AiHb-375) is situated has remained in the Hogg family for a number of years, only transferring ownership from James Hogg to his son, John Hogg. The Stage 1-2 archaeological assessment conducted by Golder in 2019 concluded that…

"… recovered artifacts from Location 3 (AiHb-375) appear to date to the late 19th century. Although Location 3 (AiHb-375) does not correspond with any illustrated structure on the historical mapping it is likely associated with the 19th century residents of the property; at the time the property was owned by the Hogg family."

Golder Associates Ltd. 2019

While the site was occupied in the late 19th century, further research shows that though James Hogg is associated with the land and the structures illustrated on the historical mapping, the Hogg family was not the first settlers to occupy the land, as there is evidence of earlier settlers living on the property during the 1850s and 1860s (Town of Puslinch 2022, Personal Census 1851). Lot 18, Concession 1, Rear, was first occupied by Hector Smith in 1832 and owned by Charles Evans and Adam Dunn in 1832. The 1851 census places Charles Evans living on Lot 18, Concession 1, Rear with his family.

Based on the 1851 census information which places Charles Evans as living on the property and 1861 map of Puslinch Township which places James Hogg on the property it is presumed that James Hogg purchased Lot 18, Concession 1, Rear sometime after 1851 and before 1861.

The 1861 map of Puslinch Township indicates that James Hogg owns the northern portions of Lots 19 and 20, Concession 1, Rear in addition to Lot 18, Concession 1, Rear.

The 1861 map of Puslinch Township and the 1871 *Illustrated Atlas of Wellington County* does not depict any structures being within the Study Area, despite the earlier history of the lot. The 1871 *Illustrated Atlas of Wellington County* does depict two structures on John Hoggs properties on Concession 2 and it is presumed that this is where he and his family were living at the time, rather than within the Study Area in the vicinity of Location 3 (AiHb-375).

The 1861 personal census indicates James Hogg and his family were living in the area in a log cabin, though it does not indicate which lot his family was living. Based on the information from the 1851 personal census, the Gazetteer and Directory 1867, and the Town of Puslinch Historical Society, several families occupied the property, possibly as freeholders or tenants, though no evidence of a structure is illustrated on the historical mapping. James Hogg would eventually move to the property, and a stone home was built on the property prior to 1892 for James Hogg's son John (Town of Puslinch 2022).

The 1906 historical map does indicate a structure within the Study Area, in close proximity to the current extant home 160 m northeast of Location 3 (AiHb-375). As no structures are depicted on the 1877 mapping this suggests a construction date post-1877 of the structure. The 1906 map also illustrates a Donald McLean as the new owner of what was John Hoggs property on Concession 2, where it was presumed the Hogg family was living in 1871. It could be inferred that the Hogg family moved to the structure shown on the contemporary 20th century maps south of the Study Area sometime after 1877 and prior to 1906.

Nineteenth-century homesteads could include an array of components including a domestic dwelling, barns, sheds, silos, dairies, wells, cisterns, root cellars, gardens, orchards, wood lots, lanes, paths, fences, farmhand housing and refuse pits (Klein et al. 2001:10). Though potential features uncovered at Location 3 (AiHb-375) yielded little direct evidence of a structure, a cautious approach was employed for potential features, therefore only the broadest conclusions as to their function have been formulated, as outlined in Section 3.2. Artifacts from units associated with potential features are consistent with the overall assemblage, with no notable differences in terms of temporal affiliation.

The assemblage recovered from Location 3 (AiHb-375) is largely characterized by domestic artifacts that would be related to food and beverage production and consumption (68.14%), while a much smaller percentage relates to items with a structural function (22.88%). These functional group proportions are consistent with what is typically expected for a domestic household where food and beverage related artifacts predominate, rather than material often found in and around abandoned root cellars, wells, or privies. Generally, found in the latter are structurally related items which tend to predominate over food and beverage artifacts (MacDonald 1997). It is possible that Location 3 (AiHb-375) represents a domestic household associated with the occupation of the land between 1832 and 1877. A total of 475 faunal elements were recovered from Location 3 (AiHb-375), 472 of which were identified as mammalian, 4 of which were identified as domestic cattle or pig. A faunal assemblage comprising almost 7% of the Stage 3 artifact assemblage is another indicator that Location 3 (AiHb-375) likely represents a domestic household.

The farmstead within the Study Area as illustrated on the 1877 County Atlas of Wellington County was not one of the first occupations in Puslinch nor the immediate vicinity and illustrates that almost all the properties surrounding the Study Area had at least one structure built on the property by 1877 (Map 3). Although no structure is illustrated within the study area on the 1877 Atlas,, there is historical documentation that indicates the property was occupied since at least 1832.

The above evidence suggests that the artifact assemblage from Location 3 (AiHb-375) can be associated with the 19th century occupations on the property by either Charles Evans family or the Hogg family's earlier ownership of the land where the site is located. Artifacts that can be assigned smaller date ranges suggest the site reflects a date of occupation between the 1840s to the 1870s. Artifacts with broader date ranges suggest a temporal trend that is consistent with a date of occupation of the mid- to late- 19th century. Though the historical mapping does not illustrate a structure on the property, historical research indicates an earlier occupation of the land. Taken together, the artifact assemblage and archival research support a date of occupation of the mid- to late-19th century. Based on Section 3.4.2, Standard 1a of the MHTSCI's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), Location 3 (AiHb-375) exhibits further cultural heritage value or interest (CHVI) as at least 80% of the time span of occupation and the artifact assemblage predates 1870.

6.0 RECOMMENDATIONS

The results of the Stage 3 Archaeological Assessment identified Location 3 (AiHb-375) as a historical mid- to late-19th century Euro-Canadian site, with the main occupation date between 1840s and 1870s; as such, the site exhibits cultural heritage value and interest. Based upon the impact the proposed limits of extraction will have upon the site, it is not possible for the site to be avoided. Therefore, the following recommendations are made:

1) The pre-contact Indigenous component does not exhibit further cultural heritage value or interest based on the frequency in which artifacts were recovered over multiple units as per Section 3.4.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

2) Based on the CHVI documented within the artifact assemblage and the Euro-Canadian historical context for Location 1 (AiHb-375), the site will be subjected to Stage 4 mitigation by excavation be conducted as per Section 4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). As the artifact assemblage postdates 1830, Section 4.2.7 Standard 2 applies, which requires all midden areas to be hand excavated, followed by mechanical topsoil removal of the remainder of the site. As the site is located within plough zone which has resulted in the artifacts being disturbed and redistributed and therefore are not in situ, as well as the high counts of artifacts in multiple units no potential midden areas were identified during the Stage 3 Archaeological Assessment. Based on these conditions, mechanical topsoil removal of the site can proceed immediately. Mechanical topsoil removal should be undertaken with a backhoe or gradall-type excavator with a flat-edged bucket and should stop at subsoil interface, at which time the subsoil should be assessed for cultural features as per Section 4.2.3., Standard 2 and 3, and must be completed 10 m beyond any identified features, up to the limits of the proposed area of impact.

3) Excavation will only be conducted when weather and lighting conditions meet the conditions of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). Following mechanical topsoil removal, all identified cultural features will be documented with photographs and drawings, and subsequently hand excavated. If larger cellar features are encountered, a minimum of two opposing quadrants must be hand excavated. All architectural remains must be documented with scale drawing and photographs, and all structural features must be excavated according to the requirements for complex stratified sites. All excavated feature soil will be screened through 6 mm wire mesh to facilitate artifact recovery. A thorough photographic record of the Stage 4 mitigation must be maintained.

4) A report documenting the methods and results of the Stage 4 mitigation and laboratory analysis of the artifacts, together with an artifact inventory, and all necessary cartographic and photographic documentation must be produced in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

5) Until such time that Location 3 (AiHb-375) can undergo the recommended Stage 4 excavation, the site should be avoided and protected by establishing a “no-go” zone consisting of the site and a 10 m protective buffer (Map 10). The proposed protected area must be shown on all contract drawings, when applicable, and be labeled as a “no-go” zone. Instructions should be provided to all construction staff to stay outside of this area. Any ground alterations to Location 3 (AiHb-375) and its protective buffer area should be avoided. This includes but is not necessarily limited to impacts from aggregate extraction, aggregate processing, vegetation clearance, and the construction of access roads or berms over the site. It also includes minor forms of soil disturbance, such as tree removal, minor landscaping, and utilities installation. If grading or other soil disturbing activities are anticipated to extend to the edge of the area to be avoided, then a temporary barrier must be erected around Location 3 (AiHb-375) and its 10 m protective buffer. No-go instructions must be given to all on site extraction crew and others involved in the day-to-day decisions on site, and a licensed archaeologist should be contracted to inspect and monitor the effectiveness of the avoidance strategy. After completion of these activities, a report will be prepared on the effectiveness of the strategy.

The Ontario Ministry of Citizenship and Multiculturalism is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

7.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issue by the ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced 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 licenced archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be representative of a new archaeological site or sites and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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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9.0 IMAGES

Image 1: Stage 3 CSP field conditions, facing southwest (28 October 2020).

Image 2: Stage 3 grid setup, facing east (30 October 2020).

Image 3: Stage 3 test unit excavation, facing east (30 October 2020).

Image 4: Plan view of test unit 80E 100N:01. View of potential cultural feature 1, facing north (3 November 2020).

Image 5: Stage 3 test unit excavation, facing south (3 November 2020).

Image 6: Plan view of test unit 85E 60N:01. View of potential cultural feature 2, facing north (3 November 2020).

Image 7: Stage 3 test unit excavation, facing north (4 November 2020).

Image 8: Plan view of typical excavated test unit at Location 3 (AiHb-375), 95E 95N:01, facing north (4 November 2020).

Image 9: Profile view of typical excavated test unit at Location 3 (AiHb-375), 695E 95N:01, facing south (4 November 2020).

Image 10: Backfilling excavated Stage 3 unit, facing southeast (5 November 2020).

Image 11: Plan view of test unit 90E 80N:01. View of potential cultural feature 3, facing north (5 November 2020).

Image 12: Stage 3 test unit excavation, facing northwest (10 November 2020).

Image 13: Stage 3 test unit excavation, facing north (11 November 2020).

Image 14: Plan view of excavated test unit exhibiting different subsoil conditions at Location 3 (AiHb-375), 55E 95N:01, facing north (11 November 2020).

Image 15: Profile view of excavated test unit exhibiting different subsoil conditions at Location 3 (AiHb-375), 55E 95N:01, facing north (11 November 2020).

Image 16: Stage 3 test unit excavation, facing north (11 November 2020).

Image 17: Stage 3 excavation returned to grade after excavation, facing southeast (11 November 2020).

Image 18: Stage 3 excavation returned to grade after excavation, facing west (11 November 2020).

Image 19: Top to bottom, left to right, representative example of leather shoe heel (x2); copper alloy, umbrella piece; slate pencil fragment; metal buckle; 4-holed agate button; 4-hole shell button.

Image 20: Left to right, top to bottom, representative example of pipe stem fragment, white clay, undecorated; pipe bowl, white clay, undecorated (X2); Henderson Montreal pipe stem, white clay; Bannerman Montreal pipe stem, white clay; pipe bowl fragment, white clay, undecorated; pipe bowl fragment, white clay, fluted.

Image 21: Left to right, representative sample of bottle, patent finish; bottle, packer finish.

Image 22: Top to bottom, left to right, representative example of vitrified white earthenware, undecorated (x5); vitrified white earthenware, exhibiting makers marks (x3).

Image 23: Top to bottom, left to right, representative example of vitrified white earthenware, moulded (x5).

Image 24: From top to bottom, left to right, representative example of: RWE undecorated; RWE flow transfer print; RWE sponged (x2); RWE stamped; RWE painted (x4); RWE banded; RWE edged ware (x3); RWE transfer print (x5).

Image 25: Left to right, representative example of: yellowware undecorated (x2); yellowware, industrial slip, dendritic.

Image 26: Representative example of: redware.

Image 27: Left to right, representative example of: VWE, undecorated (x2); VWE, moulded with purple transfer print overlay.

Image 28: Top to bottom, left to right, representative sample of coarse red earthenware, yellow glaze; coarse red earthenware, brown glaze; coarse red earthenware, dark brown glaze; coarse red earthenware, brown glaze.

Image 29: Top to bottom, left to right, representative example of stoneware, with blue; stoneware, undecorated (x2); stoneware interior, Albany slip; stoneware, undecorated.

Image 30: Top to bottom, left to right, example of metal hardware: metal, hinge; metal, wrought nail (x2); metal, machine cut nail (x3); metal, horseshoe nails (x2); metal, wire drawn nail (x2); metal, washer; metal, screw (x2); miscellaneous metal hardware.

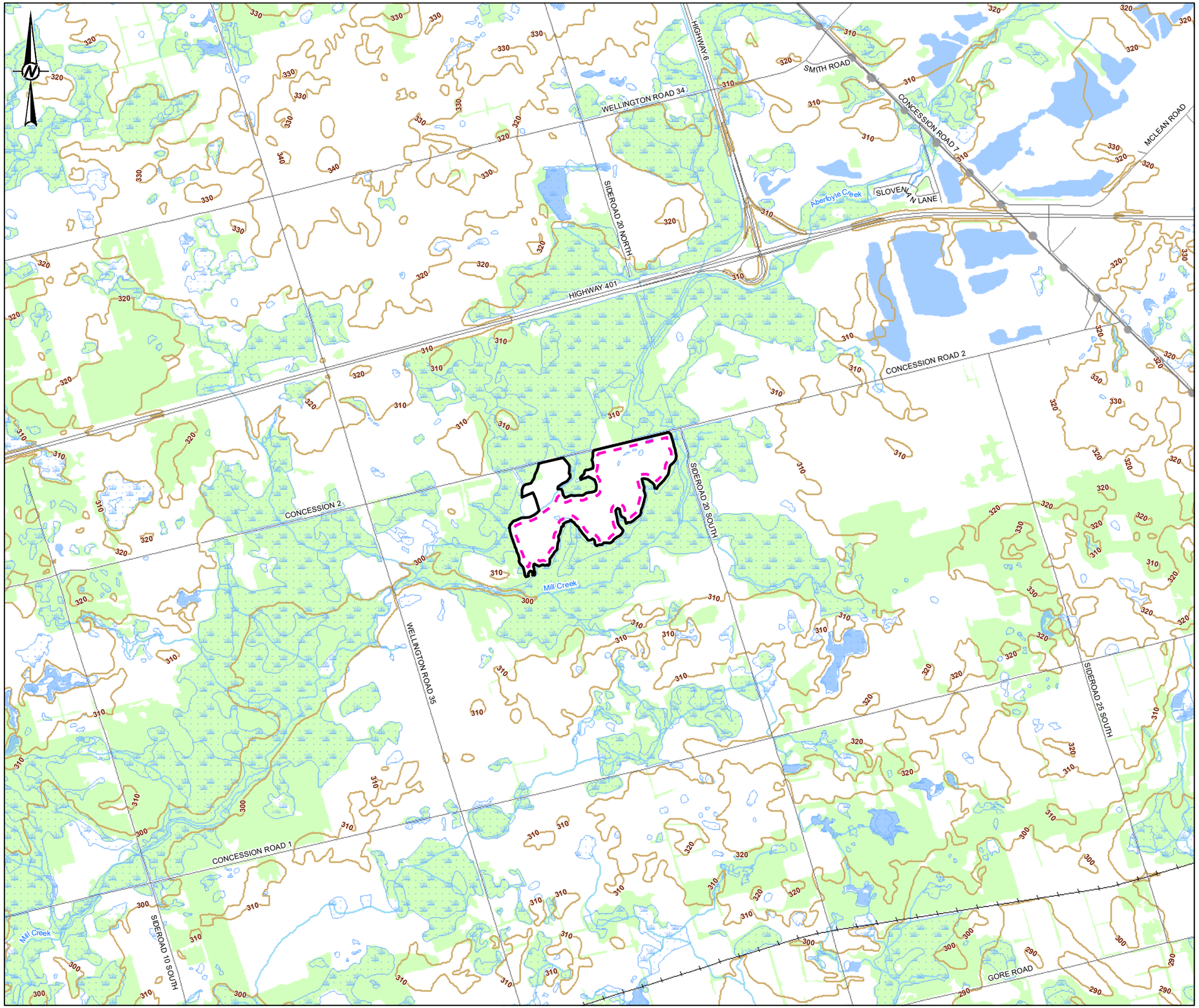
Image 31: Left to right: metal, three-tined fork; metal utensil handle (x2).

Image 32: Left to right, examples of Onondaga lithic debitage: tertiary reduction flake (x4).

Image 33: Left to right, example of: Termina Archaic projectile point, Onondaga chert; broken projectile point base, Onondaga chert.

10.0 MAPS

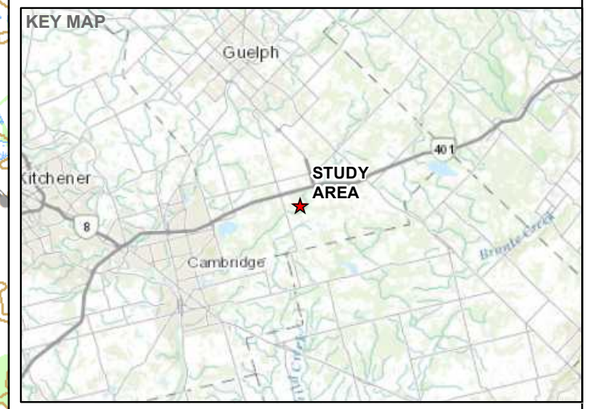
All maps follow on succeeding pages.



LEGEND

- CONTOUR (M)
- ROAD
- RAILWAY
- UTILITY LINE
- WATER COURSE
- WETLAND
- WATERBODY
- WOODED AREA
- PROPOSED EXTRACTION AREA
- LICENSE BOUNDARY/STUDY AREA

KEY MAP



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3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
PROJECTION: TRANSVERSE MERCATOR

CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375)
LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

LOCATION OF STUDY AREA

CONSULTANT

wsp

YYYY-MM-DD	2023-05-10
DESIGNED	ST/SD
PREPARED	ST/BR/SD
REVIEWED	SN
APPROVED	RF

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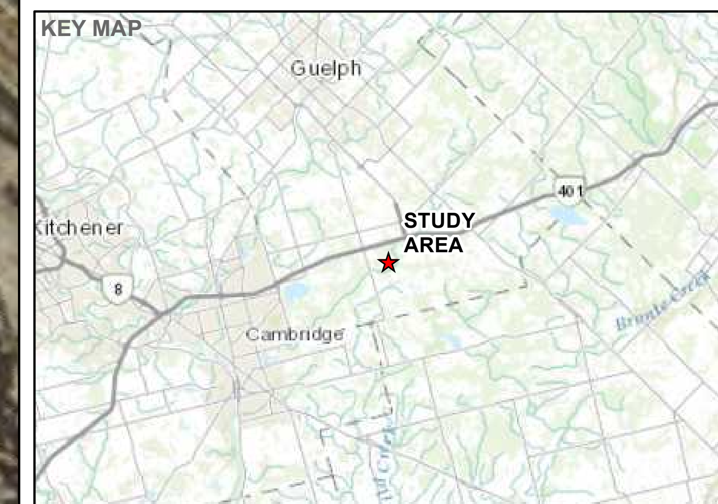
PROPOSED EXTRACTION AREA

LICENSE BOUNDARY/STUDY AREA

KEY MAP



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PROJECTION: TRANSVERSE MERCATOR

CLIENT
CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT
STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375)
LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE
PATENT PLAN PUSLINCH TOWNSHIP

CONSULTANT

YYYY-MM-DD	2023-05-10
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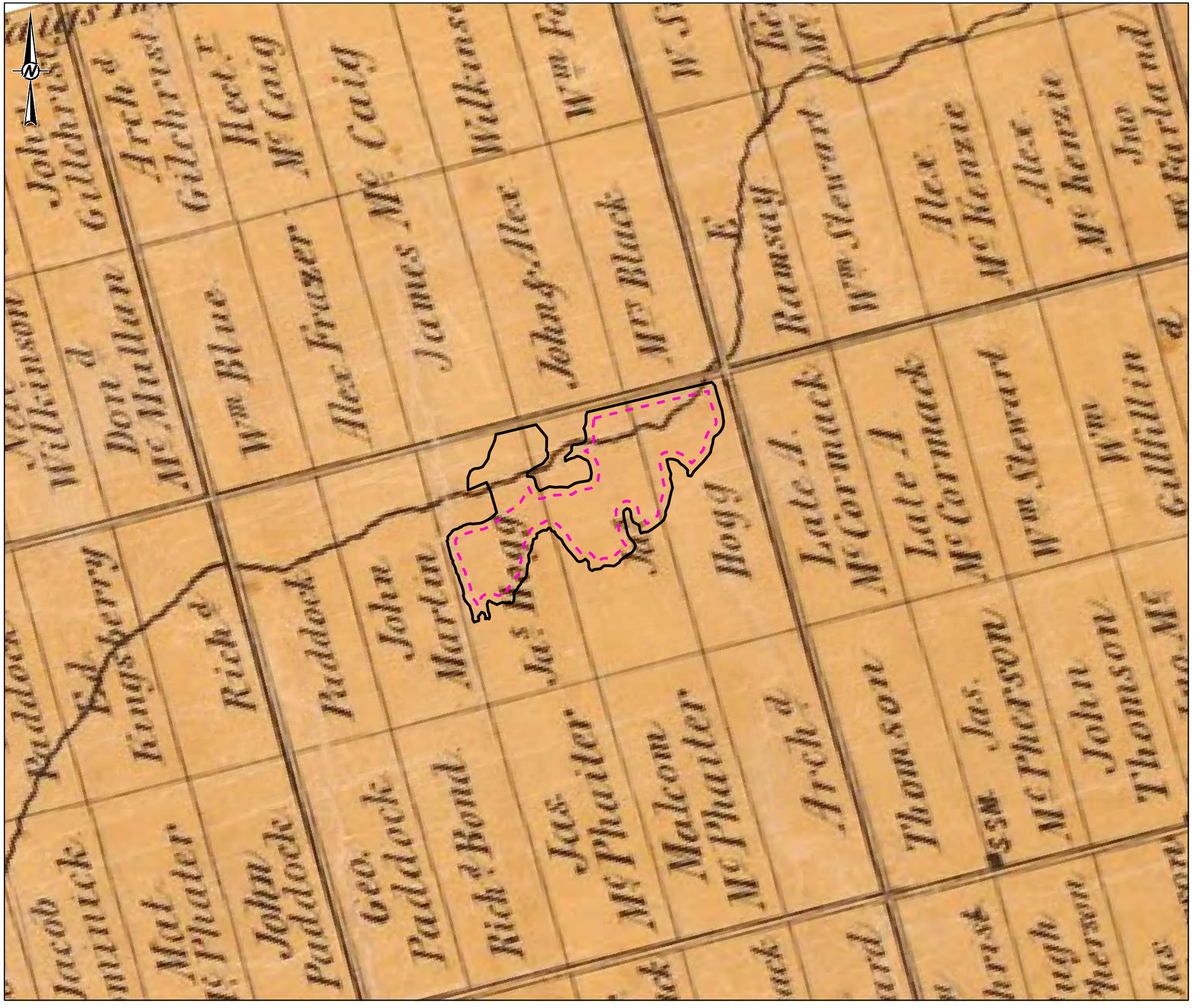
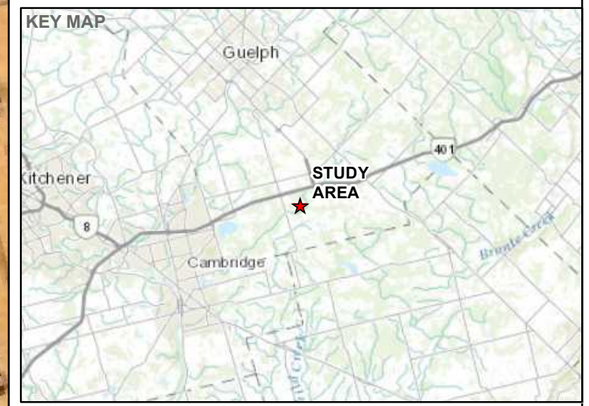


LEGEND

- PROPOSED EXTRACTION AREA
- LICENSE BOUNDARY/STUDY AREA

KEY MAP



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CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375) LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

A PORTION OF THE 1861 MAP OF PUSLINCH TOWNSHIP

CONSULTANT

wsp

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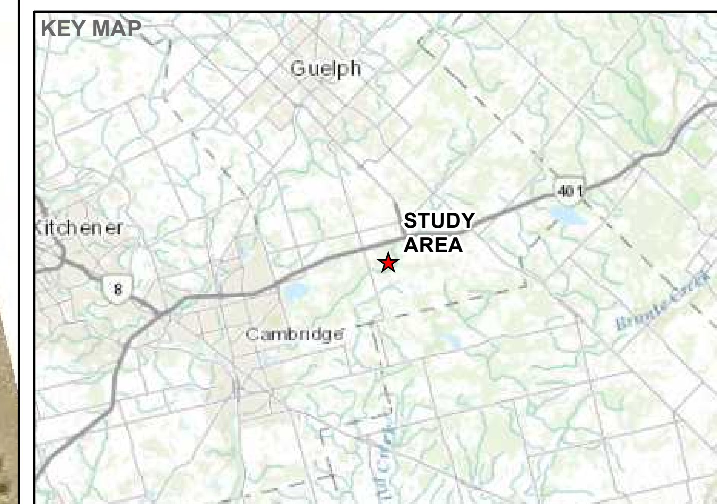
PROPOSED EXTRACTION AREA

LICENSE BOUNDARY/STUDY AREA

KEY MAP



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CLIENT
CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT
STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375)
LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE
A PORTION OF THE 1877 COUNTY ATLAS OF WELLINGTON COUNTY

CONSULTANT

wsp

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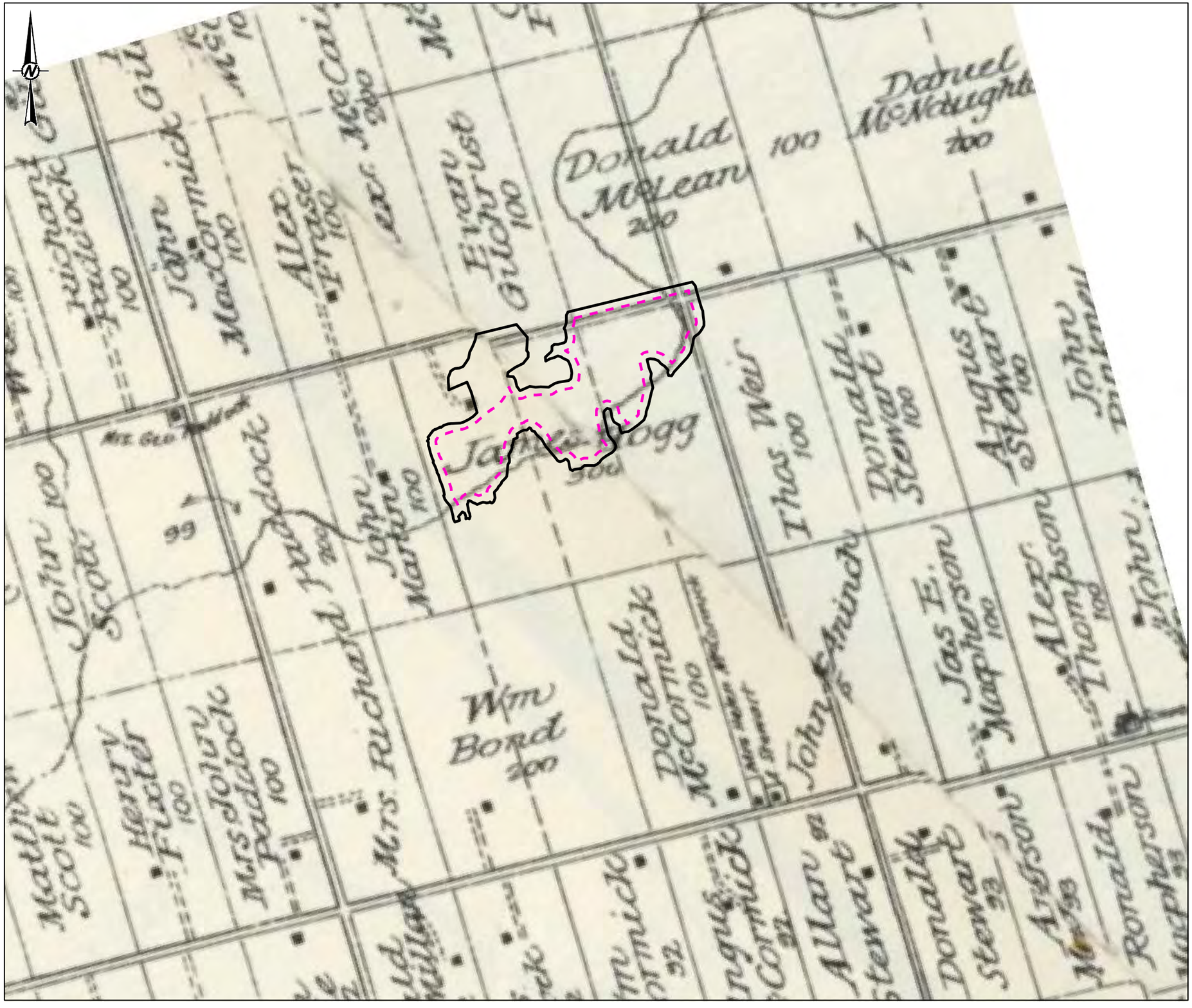

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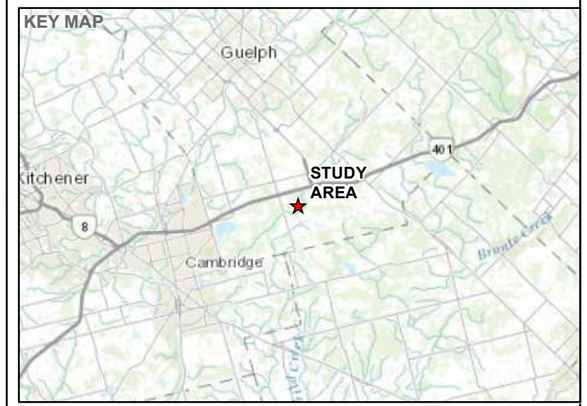
- PROPOSED EXTRACTION AREA
- LICENSE BOUNDARY/STUDY AREA

KEY MAP



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PROJECTION: TRANSVERSE MERCATOR

CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375) LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

A PORTION OF THE 1906 MAP OF PUSLINCH TOWNSHIP

CONSULTANT

wsp

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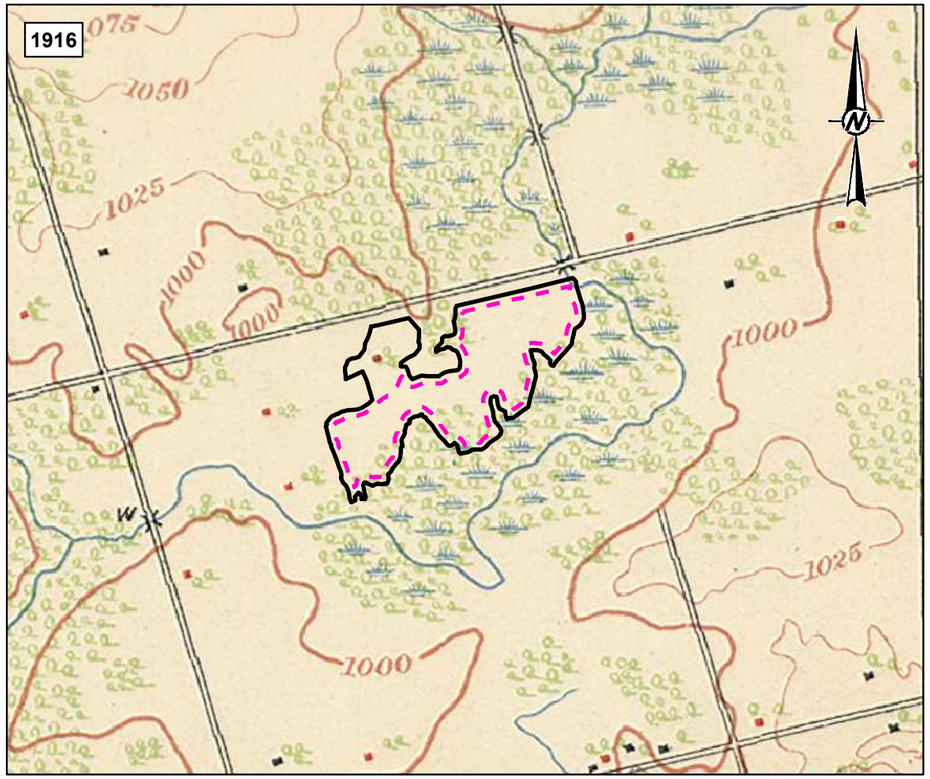

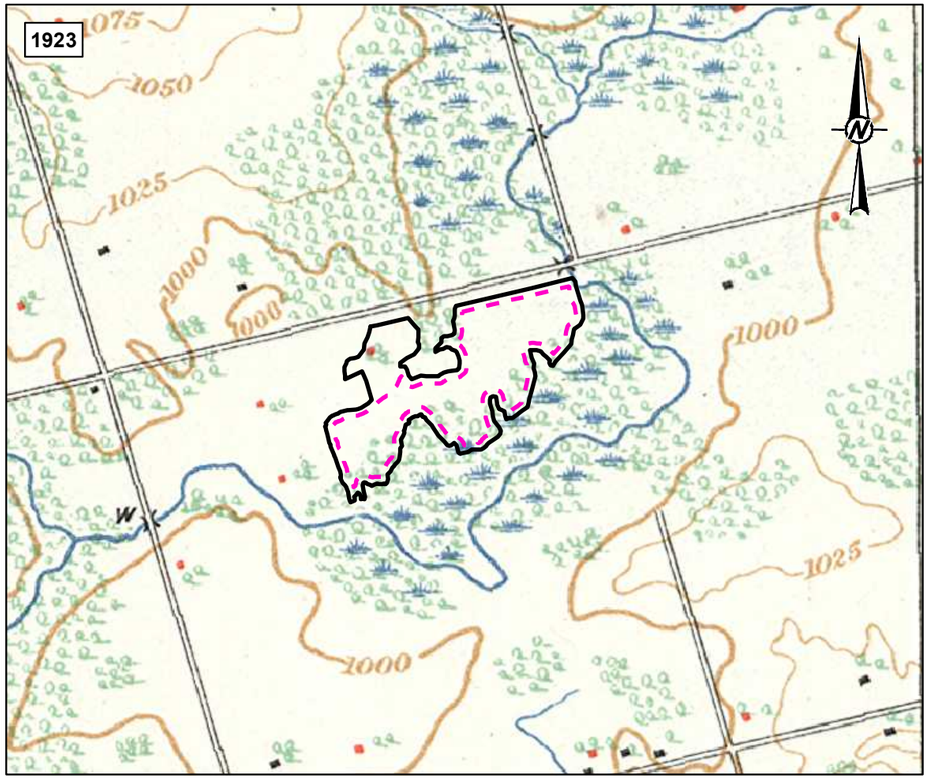

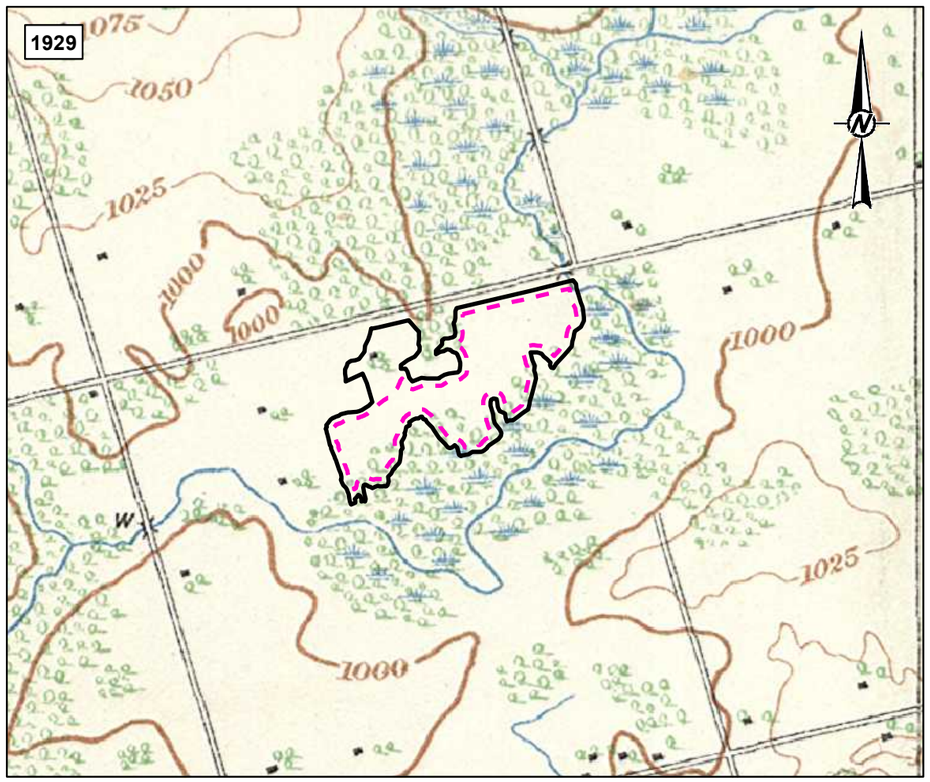

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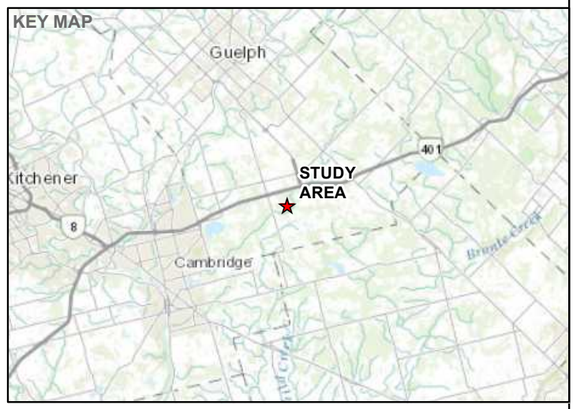

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CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375)
LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

NATIONAL TOPOGRAPHICAL SERIES MAPPING

CONSULTANT

wsp

YYYY-MM-DD	2023-05-10
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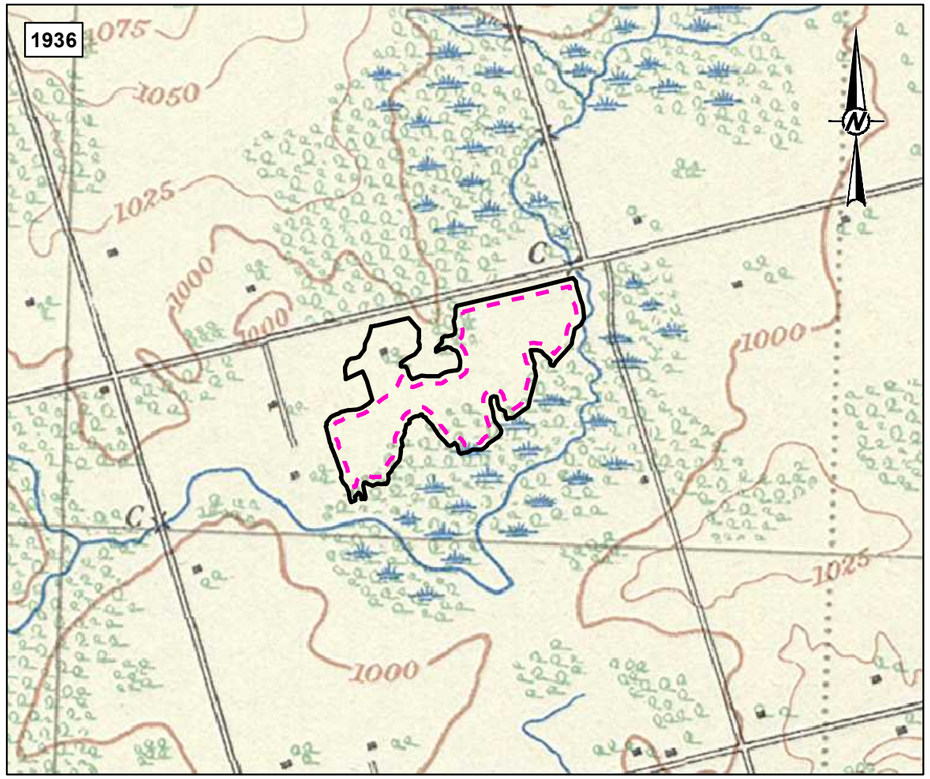

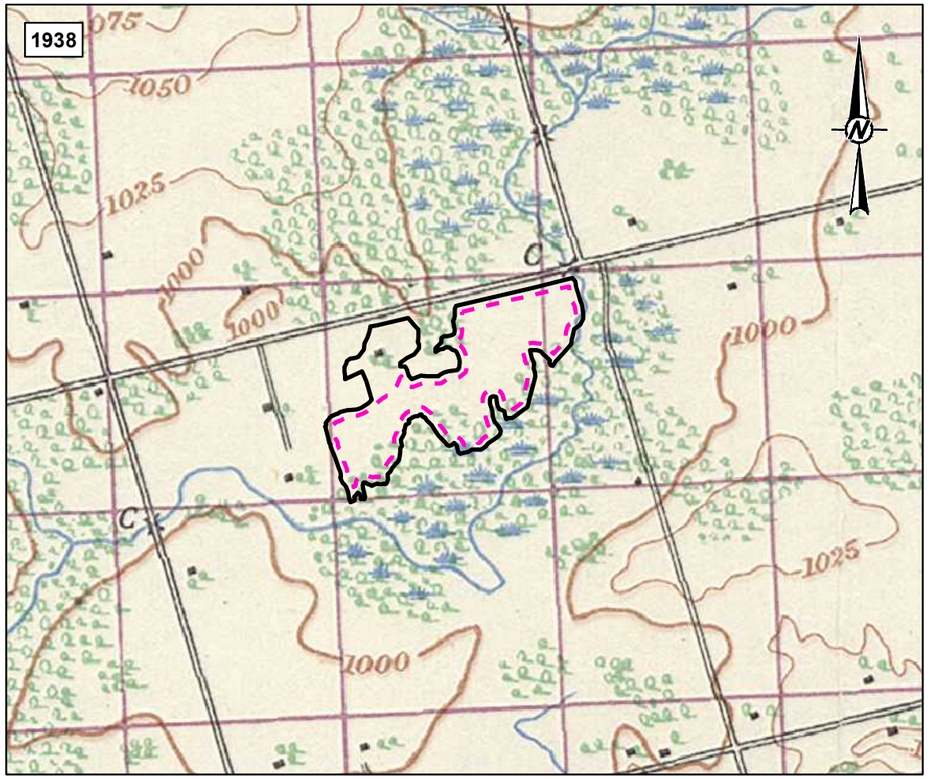

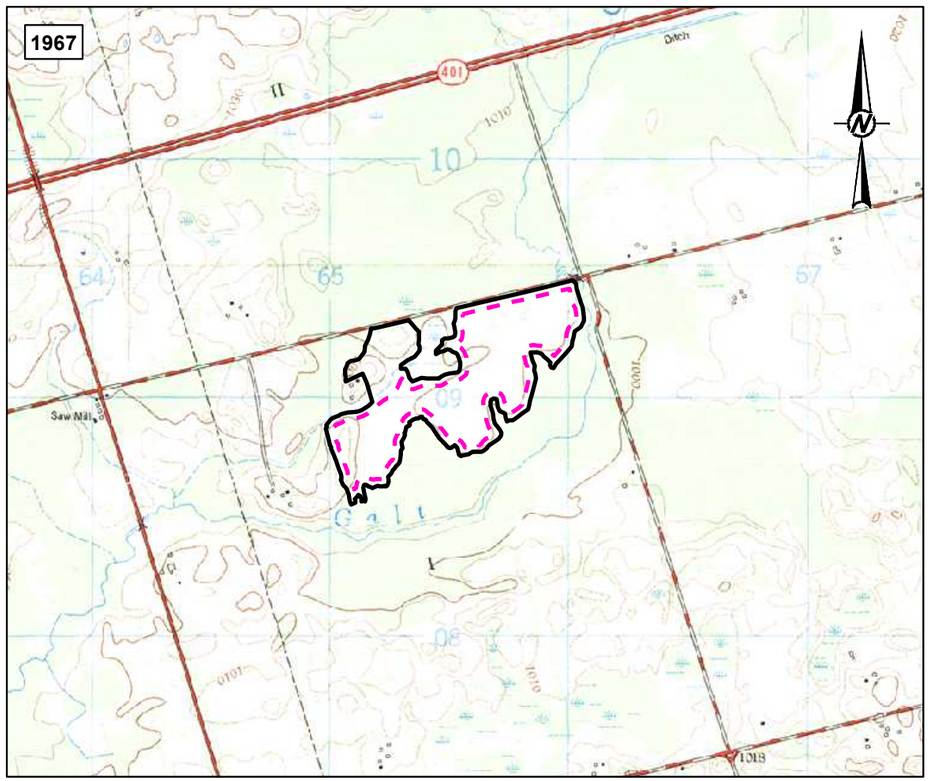

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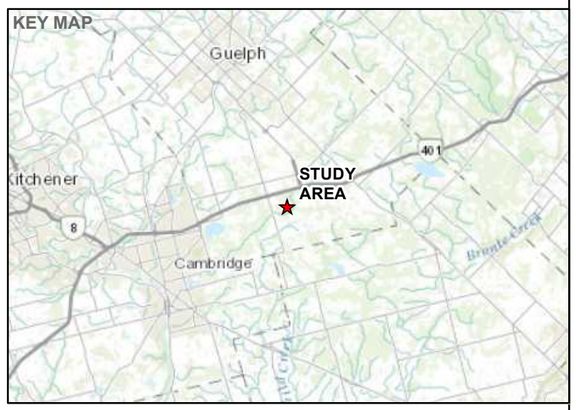
LICENSE BOUNDARY/STUDY AREA



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CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AIHB-375)
LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

NATIONAL TOPOGRAPHICAL SERIES MAPPING

CONSULTANT

wsp

YYYY-MM-DD	2023-05-10
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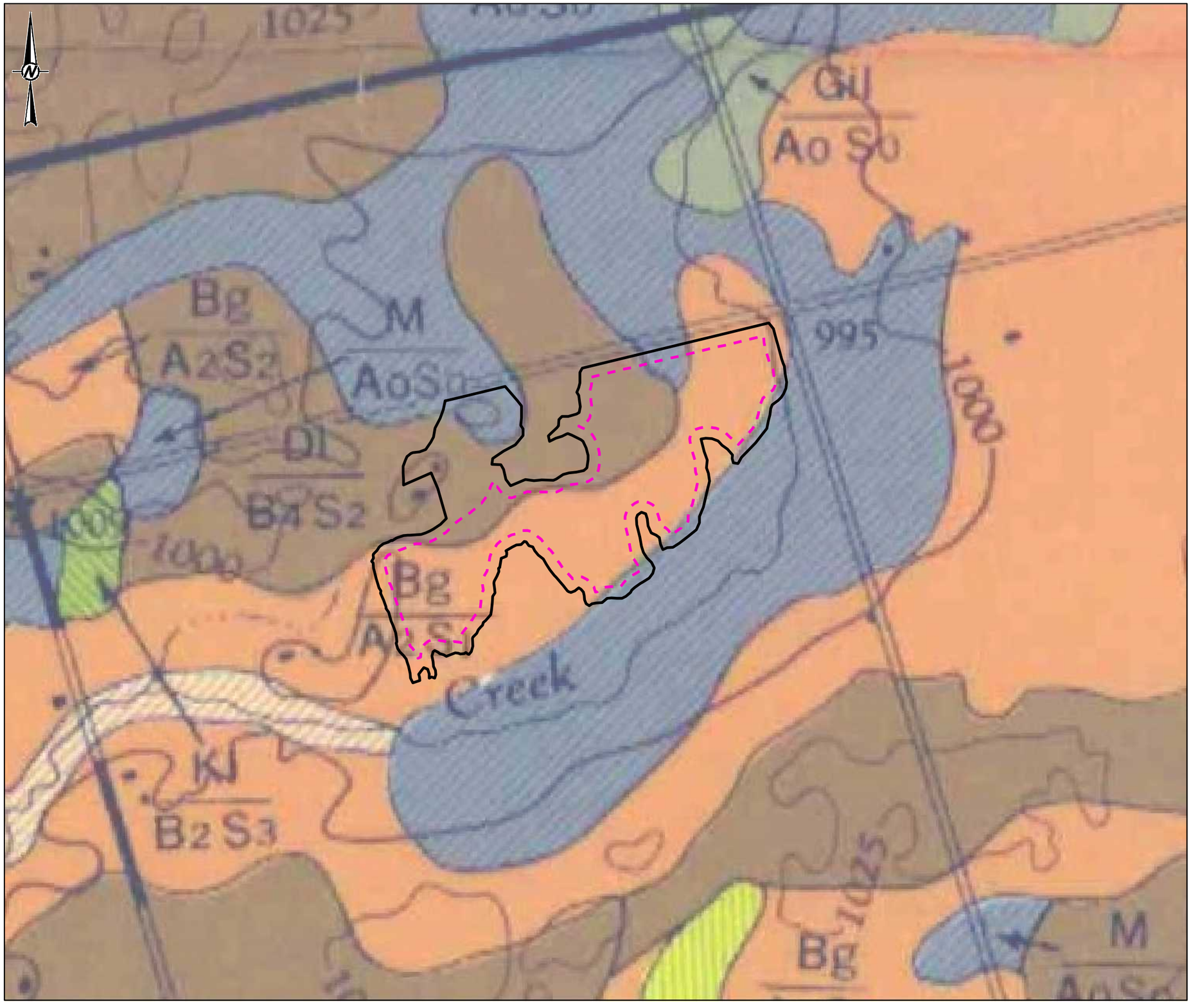

LEGEND

PROPOSED EXTRACTION AREA

LICENSE BOUNDARY/STUDY AREA

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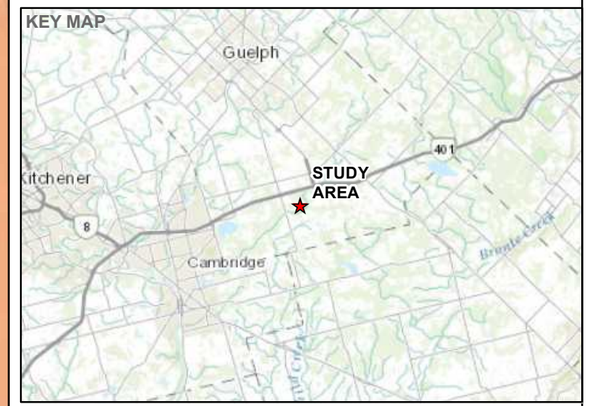
	BURFORD LOAM	GRAVEL
	DUMFIRES	STONY, SANDY LOAM TILL
	GILFORD LOAM	GRAVEL
	KILLEAN LOAM	STONY, SANDY LOAM TILL
	MUCK	
	STREAM COURSES	

KEY MAP



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REFERENCE(S)

1. SOIL MAP: HOFFMAN DW, MATTHEWS BC, WICKLUND RE. 1963. SOIL SURVEY OF WELLINGTON COUNTY. REPORT NO. 35 OF THE ONTARIO SOIL SURVEY. RESEARCH BRANCH, CANADA, DEPARTMENT OF AGRICULTURE AND THE ONTARIO AGRICULTURAL COLLEGE.
2. IMAGERY: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
PROJECTION: TRANSVERSE MERCATOR

CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375) LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

SOIL TYPES OF THE STUDY AREA

CONSULTANT

wsp

YYYY-MM-DD	2023-05-10
DESIGNED	ST/SD
PREPARED	ST/BR/SD
REVIEWED	SN
APPROVED	RF

PROJECT NO.	CONTROL	REV.	MAP
1791470A	0015	A	7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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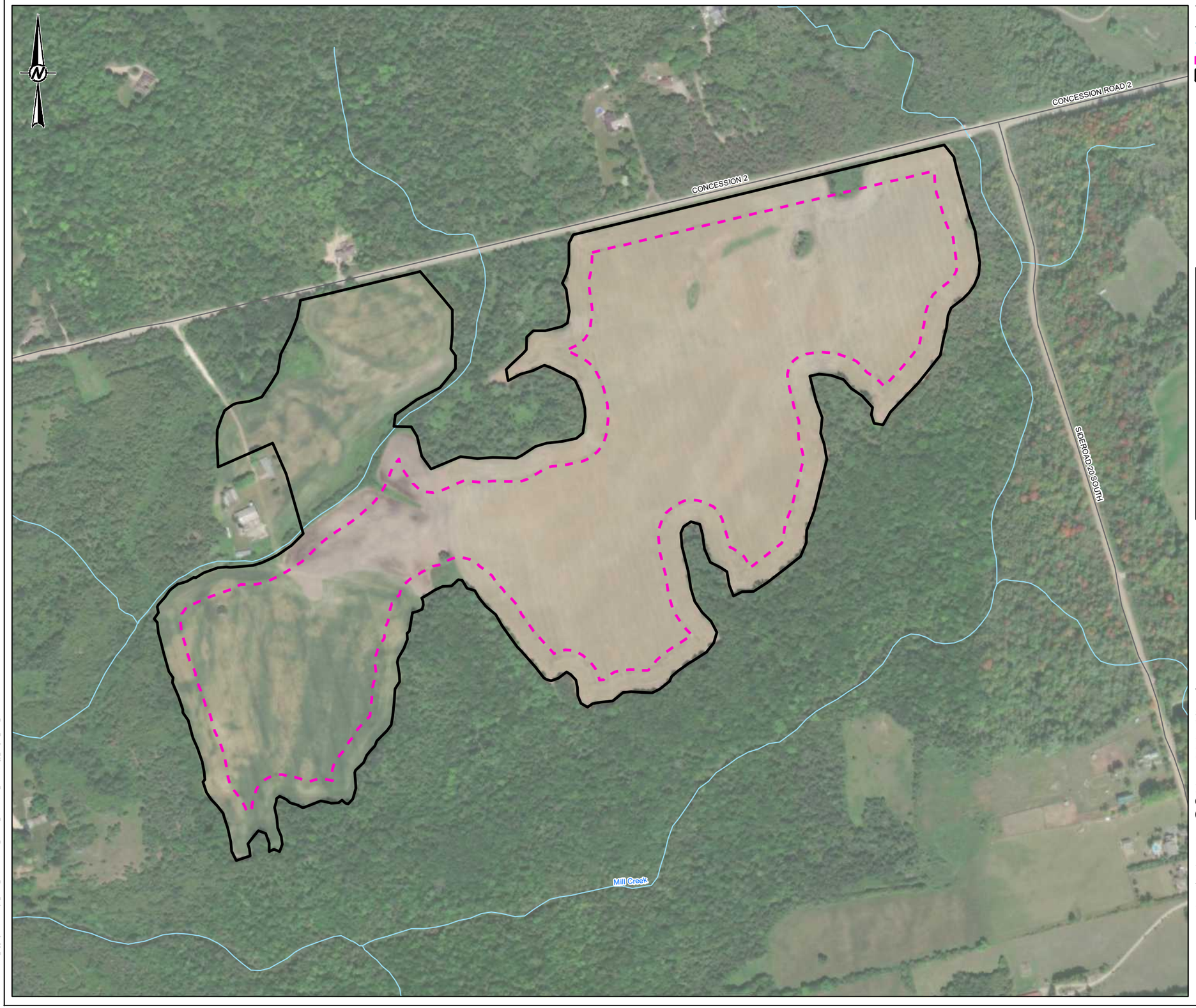
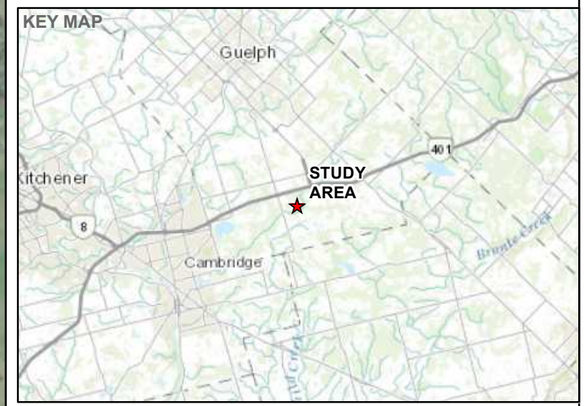


LEGEND

- ROAD
- WATER COURSE
- PROPOSED EXTRACTION AREA
- LICENSE BOUNDARY/STUDY AREA

KEY MAP



0 50 100 200

SCALE 1:5,000 METRES

REFERENCE(S)

1. BASEDATA: MNRF LIO, OBTAINED 2017
2. IMAGERY (DATED 2020/08/14): SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
   SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
   PROJECTION: TRANSVERSE MERCATOR
   DATUM: NORTH AMERICAN 1983

CLIENT

CBM AGGREGATES, A DIVISION Of ST. MARYS CEMENT INC. (CANADA)

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT LOCATION 3 (AiHb-375) LAKE PIT, 6947 CONCESSION ROAD 2, PUSLINCH, ONTARIO

TITLE

AERIAL IMAGERY OF STUDY AREA

CONSULTANT

wsp

YYYY-MM-DD	2023-05-10
DESIGNED	ST/SD
PREPARED	ST/BR/SD
REVIEWED	SN
APPROVED	RF

PROJECT NO.	CONTROL	REV.	MAP
1791470A	0015	A	8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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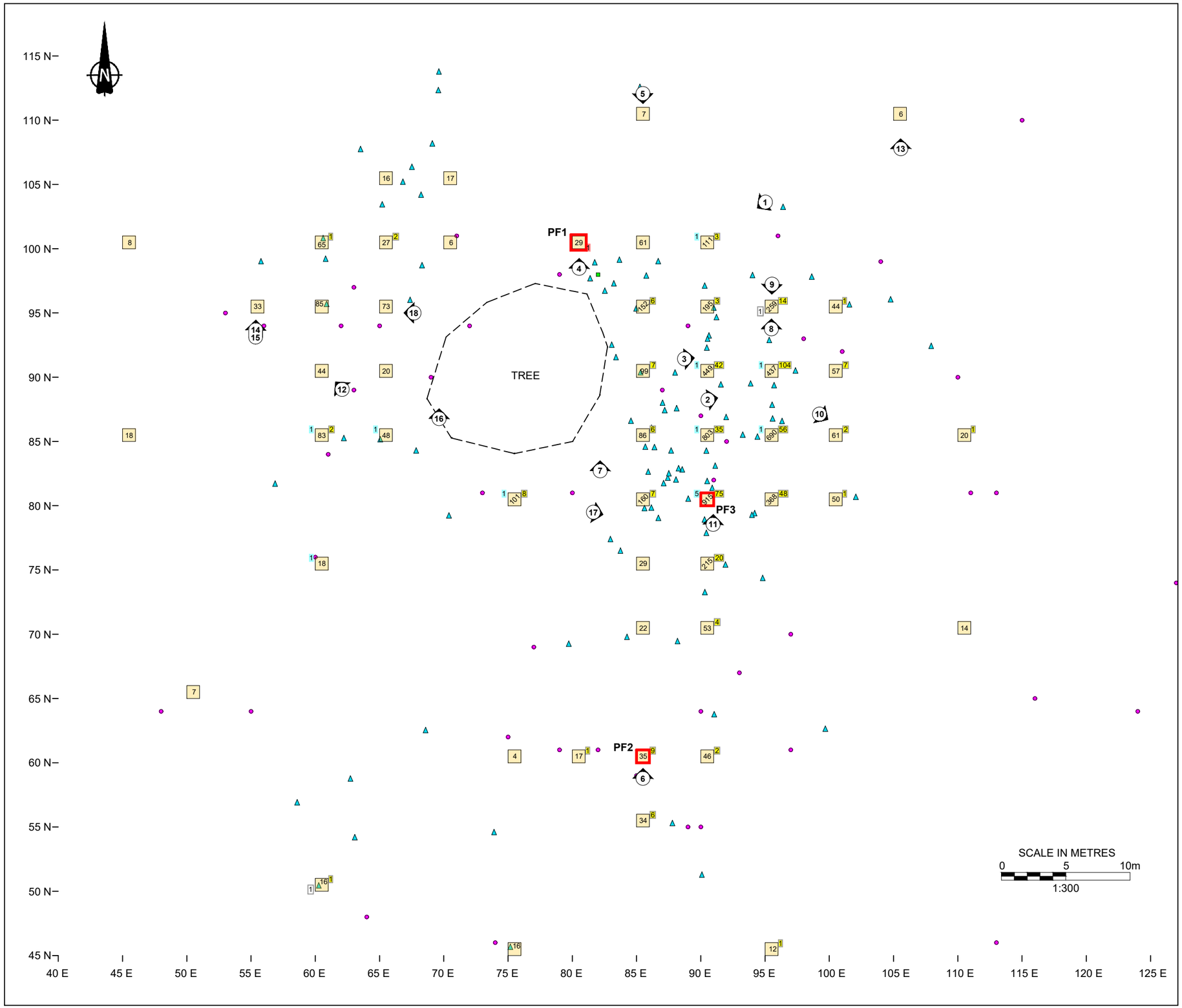


LEGEND

- STAGE 3 UNIT
- POTENTIAL FEATURE
- 1 — TOTAL NUMBER OF HISTORICAL ARTIFACTS (WITHIN STAGE 3 UNIT)
- 1 — TOTAL NUMBER OF RECENT MATERIALS (WITHIN STAGE 3 UNIT)
- 1 — TOTAL NUMBER OF FAUNAL ARTIFACTS (WITHIN STAGE 3 UNIT)
- 1 — TOTAL NUMBER OF PRE-CONTACT INDIGENOUS TOOLS (WITHIN STAGE 3 UNIT)
- 1 — TOTAL NUMBER OF PRE-CONTACT INDIGENOUS DEBITAGE (WITHIN STAGE 3 UNIT)
- STAGE 2 HISTORICAL SURFACE FIND
- STAGE 2 PRE-CONTACT SURFACE FIND
- STAGE 3 CSP HISTORICAL SURFACE FIND
- 3 — PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

REFERENCE

DRAWING BASED ON 2006 AERIAL IMAGE PROVIDED BY THE GRAND RIVER CONSERVATION AUTHORITY.

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE.

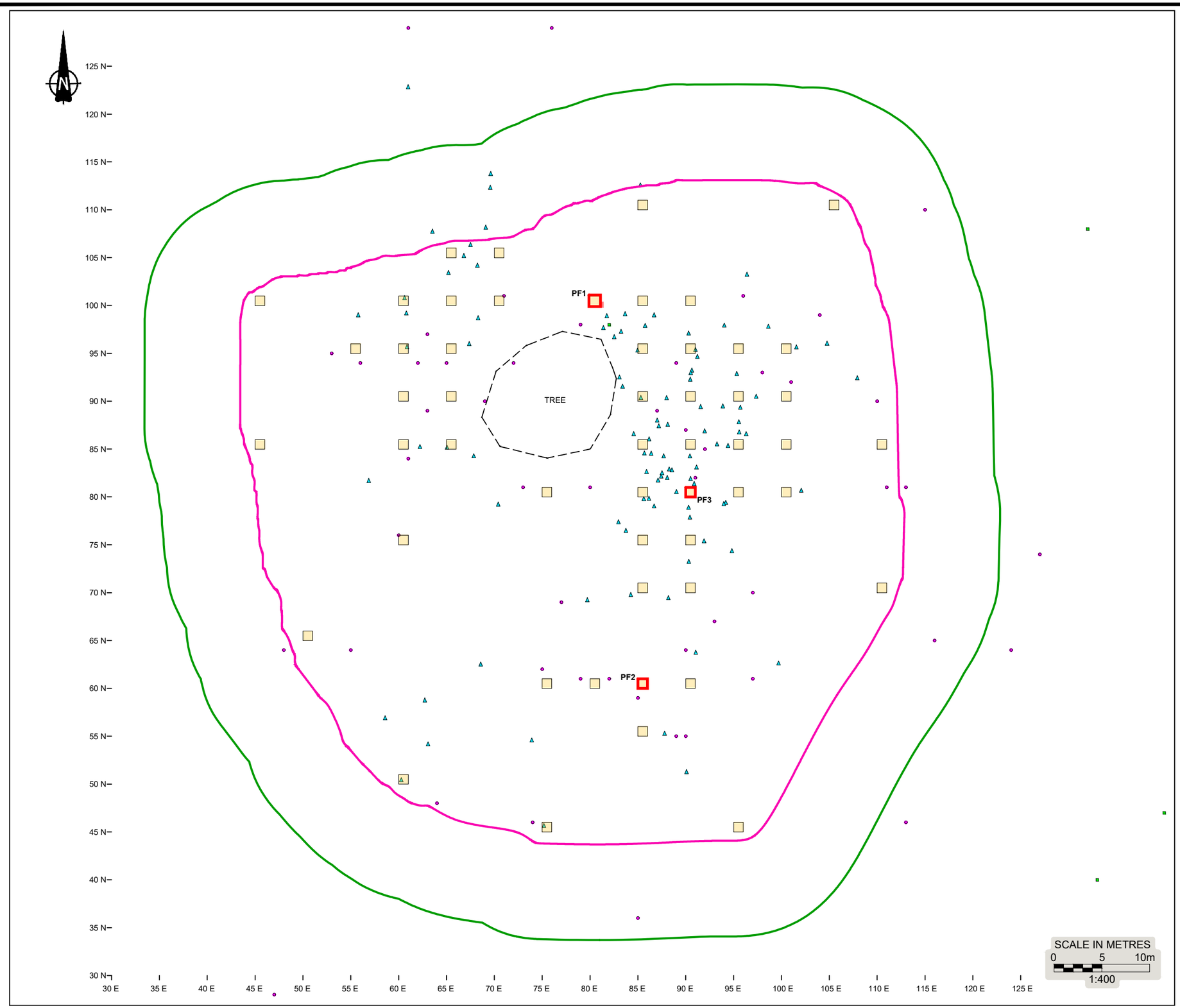
PROJECT
STAGE 3 ARCHAEOLOGICAL ASSESSMENT
LOCATION 3 (AiHb-375) LAKE PIT
6947 CONCESSION ROAD 2
PUSLINCH, ONTARIO

TITLE
STAGE 3 ARCHAEOGICAL ASSESSMENT RESULTS AND PHOTO LOCATIONS

wsp

PROJECT No.		1791470	FILE No.	1791470-14000-R01009
			SCALE	AS SHOWN
CADD	AMS	May 2023	REV.	
CHECK				

MAP 9



LEGEND

- STAGE 3 UNIT
- POTENTIAL FEATURE
- STAGE 2 HISTORICAL SURFACE FIND
- STAGE 2 PRE-CONTACT SURFACE FIND
- STAGE 3 CSP HISTORICAL SURFACE FIND
- SITE LIMIT (STAGE 3)
- 10m AVOIDANCE AND PROTECTION BUFFER

REFERENCE

DRAWING BASED ON 2006 AERIAL IMAGE PROVIDED BY THE GRAND RIVER CONSERVATION AUTHORITY.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT

STAGE 3 ARCHAEOLOGICAL ASSESSMENT
LOCATION 3 (AiHb-375) LAKE PIT
6947 CONCESSION ROAD 2
PUSLINCH, ONTARIO

TITLE

STAGE 3 EXCAVATION MAP WITH PROTECTIVE BUFFER

wsp

PROJECT No.		1791470	FILE No. 1791470-14000-R01010	
			SCALE AS SHOWN	REV.
CADD	AM	May 2023	MAP 10	
CHECK				

Signature Page

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

WSP Canada Inc.

[redacted]

Randy Hahn, Ph.D.
Archaeologist

[redacted]

Rhiannon Fisher, MSc, RPA
Senior Archaeologist

SN/RF/AM/ly/ca

https://golderassociates.sharepoint.com/sites/21291g/deliverables/archaeology/stage 3 (location 3)/revised (2022)/p468-0065-2020_01june2023_rr_stg3_loc3.docx

APPENDIX A

Stage 3 Catalogue

ID	PROV 2	PROV 1	LOT	DEPTH	CULTURAL AFFILIATION	MATERIAL 1	MATERIAL 2	FUNCTION 1	FUNCTION 2	OBJECT	FRAGMENT	ATTRIBUTE 1	ATTRIBUTE 2	MANUFACTURE	ALTERATION	# OF ARTIFACTS	# OF OBJECTS	MAKER'S MARK	TAG CODE	NOTE
811	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	agate	personal	clothing	button	complete				heat altered	1	1	FALSE	BUA	16.86 mm, 4 hole
818	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	white clay	personal	smoking	pipe stem	incomplete	plain				3	3	MAN//MONTREAL" (1	WPS	
819	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	white clay	personal	smoking	pipe bowl	incomplete	decorated/plain				6	6	FALSE	WPB	plain (5); fluted (1)
820	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	coarse red earthenware	structural	building component	brick	incomplete				exfoliated	1	1	FALSE	BRI	
823	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	yellowware	food/beverage	tableware	plate: indeterminate	body	plain				6	6	FALSE	Y--	
824	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	stoneware	food/beverage	storage container	hollowware: cylindrical	body/base	plain	grey salt glaze interior and exterior (3)			3	3	FALSE	S--	
825	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	body/handle	plain				12	12	FALSE	VWE	
826	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	body	moulded	purple			2	2	FALSE	VWE MO	floral moulding, with purple overtop
827	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	refined white earthenware	food/beverage	tableware	plate: indeterminate	body	painted	black and green			1	1	FALSE	RWE PA	floral
828	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	body	transfer print	brown			1	1	FALSE	ITR	"FLO..." in brown; graniteware
829	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	body	transfer print	blue			5	5	FALSE	ITR	blue, geometric, thick bodied; graniteware
830	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	refined white earthenware	food/beverage	tableware	plate: indeterminate	body	transfer print	dark blue			3	3	FALSE	RWE TR	filagree
831	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	refined white earthenware	food/beverage	tableware	plate: indeterminate	body/rim/base	plain				137	137	FALSE	RWE	
832	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	body/rim/base	plain				87	87	FALSE	I--	graniteware
833	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	vitrified white earthenware	food/beverage	tableware	plate: indeterminate	rim	moulded	wheat pattern			4	4	FALSE	IMO	graniteware
834	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	indeterminate	food/beverage	tableware	plate: indeterminate	body	miscellaneous			burnt/exfoliated	47	47	FALSE	MCE	graniteware
839	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	coarse red earthenware	food/beverage	storage container	hollowware: cylindrical	body	plain	light red material			5	5	FALSE	CRE	
840	Location 3	90E 80N: 01	1 (topsoil)	0-37	Euro-Canadian	ceramic	coarse red earthenware	food/beverage	storage container	hollowware: cylindrical	body/rim/base	glaze: lead (230); unglazed (140				370	370	FALSE	CRE	

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