



22 September 2017

**PROPOSED DANCE PIT EXTENSION, PART  
OF LOTS 14 AND 15, CONCESSION 10,  
TOWNSHIP OF NORTH DUMFRIES, ONTARIO**

**Stage 1 and 2 Archaeological Assessment**

ORIGINAL REPORT

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PIF Number	P1056-0073-2016

**Report Number: 1653019-4000-R01**

**Distribution:**

1 PDF - CBM Aggregates Ltd.  
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## **Executive Summary**

A Stage 1 and 2 archaeological assessment was conducted on behalf of CBM Aggregates Ltd. (CBM), a division of Votorantim Cimentos North America (VCNA) by Golder Associates Ltd. (Golder) for an approximate 29.05 hectare Site. The Site is located on Part of Lot 14 and 15, Concession 10, Geographic Township of North Dumfries, Ontario. This assessment was conducted in support of an aggregate pit licence application under the *Aggregate Resources Act* for the proposed extension of the existing CBM Dance Pit (MNRF Licence No. 17348).

The objective of the Stage 1 assessment was to compile all available information about the known and potential archaeological resources within the Site and to provide direction for the protection, management and/or recovery of these resources, consistent with Ministry of Tourism, Culture and Sport (MTCS) guidelines (MTCS 2011). The Stage 1 background study found potential to exist within the Site for the recovery of pre- and post-contact Indigenous and historical Euro-Canadian archaeological resources.

The objectives of the Stage 2 archaeological assessment were to provide an overview of archaeological resources on the property and to determine whether any of the resources might be artifacts and archaeological sites with cultural heritage value or interest and to provide specific direction for the protection, management and/or recovery of these resources. Areas found to exhibit archaeological potential were surveyed by pedestrian survey and test pit survey at an interval of five metres.

The Stage 2 survey of the Site resulted in the identification of three pre-contact Indigenous findspots. The findspots included one projectile point, one hammerstone, and one biface fragment. Given the isolated nature of the three pre-contact Indigenous findspots, the cultural heritage value or interest of the Site is considered to be sufficiently documented. No further archaeological assessment is recommended for the Site, as illustrated in Map 5.

The MTCS is asked to review the results and recommendations presented herein and accept this report into the Provincial Register of archaeological reports. The MTCS is also asked to provide a letter concurring with the results presented herein.

*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.*



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## **1.0 PROJECT CONTEXT**

### **1.1 Development Context**

A Stage 1 and 2 archaeological assessment was conducted on behalf of CBM Aggregates (CBM), a division of Votorantim Cimentos North America (VCNA) by Golder Associates Ltd. (Golder) for an approximate 29.05 hectare Site. The Site is located on Part of Lot 14 and 15, Concession 10, Geographic Township of North Dumfries, Ontario. This assessment was conducted in support of an aggregate pit licence application under the *Aggregate Resources Act* for the proposed extension of the existing CBM Dance Pit (MNR Licence No. 17348). No site plan for the proposed extension is available at this time; however the approximate size of the extraction area will be 25.27 hectares.

#### **1.1.1 Stage 1 Archaeological Assessment Objectives**

The objectives of the Stage 1 Archaeological Overview/Background Study were to compile all available information about the known and potential cultural heritage resources within the Site and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the objectives of the Stage 1 Archaeological Overview/Background Study were as follows:

- To provide information about the Site's geography, history, previous archaeological fieldwork and current land conditions;
- To evaluate in detail the Site's archaeological potential to support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives Golder archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the Site;
- An examination of the Ontario Archaeological Sites Database (OASD) to determine the presence of known archaeological sites in and around the Site; and
- A review of the land use history, including pertinent historic maps.

Given indicators of archaeological potential stemming from desktop research during the Background Study, a Property Inspection (Optional) was not conducted and, instead, the first field visit was to conduct the Stage 2 Property Assessment through test pit survey. This strategy is consistent with Section 1.2 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

In addition to the consultation of records kept by the MTCS, the Background Study was conducted online and within Golder's corporate library.



### 1.1.2 Stage 2 Archaeological Assessment Objectives

The objectives of the Stage 2 Property Assessment were to provide an overview of archaeological resources within the Site and to determine whether any of the resources might be artifacts and/or archaeological sites with cultural heritage value or interest. In compliance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the Stage 2 property assessment:

- Documents the presence or absence archaeological resources with cultural heritage value or interest in the Site;
- Determines whether the Site requires further archaeological assessment; and/or
- Recommends no further archaeological assessment in the Site.

To meet these objectives Golder archaeologists conducted:

- Pedestrian survey at five metre intervals within the Site, as per Section 2.1.1 of the MTCS' *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011); and
- Test pit survey at five metre intervals within the Site, as per Section 2.1.2 of the MTCS' *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), as well as test pitting to within one metre of existing built structures as per Section 2.1.2, Standard 4 of the MTCS' *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

Permission to enter the property for the purposes of the Stage 1 and 2 archaeological assessment was given by Mr. Stephen May of CBM. The Stage 1 and 2 archaeological assessments were conducted under Project Information Form (PIF) P1056-0078-2016 issued to Jamie Lemon of Golder.

## 1.2 Historical Context

### 1.2.1 Post-contact Indigenous Occupation of Southern Ontario

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

Following the introduction of Europeans to North America, the nature of First Nations settlement size, population distribution, and material culture shifted as settlers began to colonize the land. Despite this shift in First Nations 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). As a result, First Nation 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 Site is located within the Haldimand Tract. As described by Morris (1943:19-21), the Haldimand Tract:

*Is a parcel or tract of land given to the Six Nations Indians, by Governor Haldimand October 25<sup>th</sup>, 1784, ...and conveyed by Grant the 14<sup>th</sup> of January, 1793...This Grant was composed of the*



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*following Townships: Dunn, Sherbrooke, Moulton, Canborough, North and South Cayuga, Oneida and Seneca in Haldimand County; Tusc[aro]ra, Onondaga, Brantford and South Dumfries in Brant County; North Dumfries, Waterloo and Woolwich in Waterloo County; Pilkington and Nichol in Wellington County; and is described as a parcel or tract of land six miles on each side of the Ouse or Grand River from its mouth toward its source, to be bounded by the tract of land deeded December the 7<sup>th</sup>, 1792 by the Mississa[u]ga Chiefs and people to the Crown. This part was set aside as a suitable retreat for the Six Nation Indians who had shewn attachment and Fidelity to the British Government during the troublous times 1759 to 1783 and was granted to the Chiefs, Warriors, Women and People of the Six nations and their heirs forever.*

The Stage 2 survey involved participation by archaeological field liaisons from Mississaugas of New Credit First Nation and Six Nations of the Grand River. Details of this participation is provided in Supplement C.

### 1.2.2 Euro-Canadian Settlement

#### 1.2.2.1 Township of North Dumfries

The Township of North Dumfries was initially sold as Block One by Joseph Brant, on behalf of the Six Nation, in 1795 to Philip Steadman (94,035 acres). Block One switch ownership over the next couple decades before being purchased by William Dickson in 1816; at this time Block One was renamed Dumfries Township.

The earliest transportation corridors in this part of Waterloo County included trails along the Grand River, and the Grand River itself. The Credit Valley Railway was constructed through Galt, now Cambridge, and was built in 1880 and continued to be used throughout the 19<sup>th</sup> century and into the 20<sup>th</sup> century. Cedar Creek Road and Blenheim Road were both in use before the end of the 19<sup>th</sup> century.

#### 1.2.3 Lots 14 and 15, Concession 10

Tremaine's 1861 Map of the County of Waterloo illustrate the Site was owned by two individuals, R. Gilholm and Robert Gilholm; it is possible this is the same individual. No structures are illustrated on the Site (Map 2).

The 1881 Map of the Township of North Dumfries in the *Illustrated Historical Atlas of Waterloo County* does not indicate the presence of any structures within the study area or list the names of the property owners (Map 3). This is not unusual in that only subscribers to the atlas had their names recorded and their homes depicted. Historic maps are not always accurate and the absence of a structure on the map does not necessarily mean that none were present. The map does illustrate the Site in close proximity to the Town of Galt.

## 1.3 Archaeological Context

### 1.3.1 The Natural Environment

The north part of the Site is situated within the Guelph Drumlin Field. Per Chapman and Putnam (1984:137-138) the Guelph Drumlin Field is described as follows:

*The drumlins of this field are not so closely grouped as those of some other areas and there is more intervening low ground, which is largely occupied by fluvial materials. The till in these*





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*drumlins is loamy and calcareous, and was derived mostly from dolostone of the Amabel Formation so strategically exposed along the Niagara Cuesta...The till throughout is rather stony, with large surface boulders being more numerous in some localities than others...The ice which moulded this drumlin field advanced from the southeast and the front of the melting receding glacier was at right angles to this, that is, down slope of the plain. The drainage of the ice front was consequently able to find progressively lower and lower outlets, so that the drumlin field is furrowed by more or less parallel valleys running almost at right angles to the trend of the drumlins themselves. There are also numerous interconnecting cross valleys which occupy deeper depressions between drumlins. Along the sides of these valleys there are broad sand and gravel terraces, while the bottoms are often swampy...Incidental to this pattern are the several gravel ridges or eskers which cross the plain in the same general direction as the drumlins.*

The south part of the Site is situated within the Horseshoe Moraines physiographic region. Per Chapman and Putnam (1984:128) the Horseshoe Moraines are described as follows:

*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.*

The soils of the Site include the Burford-Fox series, containing coarse and medium-textured soils formed on outwash and shallow lacustrine deposits (Presant and Wicklund 1971). These types of soils would have been suitable for pre-contact Indigenous agricultural practices.

Several small creeks and marshes are located in close proximity to the Site (Map 1); the Grand River, a major waterway through the township, is located approximately 1.9 kilometres east of the Site.

### 1.3.2 General Overview of the Pre-Contact Period in Southern Ontario

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

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

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 BC	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 – 8000 BC	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 BC	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 BC	environment similar to present
Late Archaic	Lamoka (narrow points)	2000 - 1800 BC	increasing site size
	Broadpoints	1800 - 1500 BC	large chipped lithic tools
	Small Points	1500 - 1100BC	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 BC	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 BC	introduction of pottery



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Period	Characteristics	Time Period	Comments
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 BC - AD 500	increased sedentism
	Princess Point	AD 550 - 900	introduction of corn
Late Woodland	Early Ontario Iroquoian	AD 900 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	AD 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	AD 1400 - 1650	tribal warfare and displacement
Contact Indigenous	Various Algonkian Groups	AD 1700 - 1875	early written records and treaties
Late Historic	Euro-Canadian	AD 1796 - present	European settlement

### 1.3.3 Paleo-Indian Period

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

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

Our current understanding of settlement patterns of Early Paleo-Indian peoples suggests that small bands, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending over large 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-Indian 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-Indian sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares. It appears that these sites were formed when the same general locations were occupied for short periods of time over the course of 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-Indian 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-Indian Period (Ellis and Deller 1990:54). Archaeological examples of Early Paleo-Indian sites are rare.

The Late Paleo-Indian Period (8400-8000 BC) 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-Indian Period had either moved further north, or as in the case of the mastodons and mammoths, become extinct.



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

The end of the Late Paleo-Indian 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.

### **1.3.4 Archaic Period**

During the Early Archaic Period (8000-6000 BC), the jack and red pine forests that characterized the Late Paleo-Indian environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis et al. 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 (6000-2500 BC) the trend to more diverse toolkits continued, as the presence of netsinkers suggest 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, it was possible for them to 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 Native subsistence practices, as more people had to be supported from 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 especially 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 et al. 1990:66). By 3500 BC the local environment had stabilized in a near modern form (Ellis et al. 1990:69).

During the Late Archaic (2500-950 BC) 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. Birdstones are small, bird-like effigies usually manufactured from green banded slate.

### **1.3.5 Woodland Period**

The Early Woodland Period (950 to 400 BC) 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, thick 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 life-ways 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 (300 BC to AD 500) 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 were becoming an even more important part of the diet.

In addition, 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 off and on 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 off and on over the course of 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 continues the trend witnessed from at least 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 Late Woodland, particularly within the Princess Point Complex (*circa* AD 500-1050), a number of archaeological material changes have been noted: the appearance of triangular projectile point styles, first seen during this period begin with the Levanna form; cord-wrapped stick decorated ceramics using the paddle and anvil forming technique take over from 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 Late Woodland Period is widely accepted as the beginning of agricultural life ways 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).

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 located in the uplands, on well-drained sandy soils. Categorized as "Early Ontario Iroquoian" (AD 900-1300), 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 AD 900 and 1300, share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were actually not all that large, averaging only 12.4 metres 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.



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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 and Late Ontario Iroquoian 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 Middle Ontario Iroquoian Period (AD 1300-1400) 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.

House lengths also change dramatically, more than doubling to an average of 30 metres, while houses of up to 45 metres 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 AD 1300. Other possible explanations involve changes in economic and socio-political organization (Dodd et al. 1990:357). One suggestion is that during the Middle Ontario Iroquoian Period small villages were amalgamating to form larger communities for mutual defense (Dodd et al. 1990:357). If this was 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 Middle Ontario Iroquoian villages which had no palisades present (Dodd et al. 1990). More research is required to evaluate these competing interpretations.

The lay-out of houses within villages also changes dramatically by AD 1300. During the Early Ontario Iroquoian Period villages were haphazardly planned, with houses oriented in various directions. During the Middle Ontario Iroquoian Period 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 Late Ontario Iroquoian Period (AD 1400-1650) continues many of the trends which have been documented for the preceding century. For instance, between AD 1400 and 1450 house lengths continue to grow, reaching an average length of 62 metres. One longhouse excavated on a site southwest of Kitchener was an incredible 123 metres (Lennox and Fitzgerald 1990:444-445). After AD 1450, house lengths begin to decrease, with houses dating between AD 1500-1580 averaging 30 metres in length.



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Why house lengths decrease after 1450 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 continued to expand throughout the Late Ontario Iroquoian Period, with many of the larger villages showing signs of periodic expansions. The Late Middle Ontario Iroquoian Period and the first century of the Late Ontario Iroquoian Period was a time of village amalgamation. One large village situated just north of Toronto has been shown to have expanded on no fewer than 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. Late Ontario Iroquoian village expansion has been clearly 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. They called these people the "Neutral", because they were not involved in the on-going wars between the Huron and the League Iroquois located in upper New York State. It has been satisfactorily demonstrated that the Late Ontario Iroquoian communities which were located in southwestern Ontario as far west as the Chatham area were ancestral to at least some of the Neutral Nation groups (Lennox and Fitzgerald 1990; Smith 1990). For this reason the Late Ontario Iroquoian groups which occupied southwestern Ontario prior to the arrival of the French are often identified as "Prehistoric Neutral". They occupied a large area extending along the Grand River and throughout the Niagara Peninsula as far east as Fort Erie and Niagara Falls (Lennox and Fitzgerald 1990).

### 1.3.6 Previously Identified Archaeological Sites and Surveys

In order that an inventory of archaeological resources could be compiled, the registered archaeological site records kept by the MTCS were consulted. In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Site Database (OASD) maintained by the MTCS. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometres east to west and approximately 18.5 kilometres north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The area under review is within Borden Block *AiHc*.

An examination of the OASD indicated that 30 archaeological sites are registered within a one kilometre radius of the Site (MTCS 2016). Table 2 provides a listing of these sites. The 30 sites within one kilometre of the Site includes 23 pre-contact Indigenous site (predominately isolated findspots), and seven historical Euro-Canadian sites.

**Table 2: Registered archaeological sites within 1 km of Site**

Borden #	Site Name	Site Type	Cultural Affinity
AiHc-82	Colta 4	Findspot	Pre-contact Indigenous
AiHc-81	Colta 3	Findspot	Early Archaic
AiHc-80	Colta 2	Findspot	Archaic



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Borden #	Site Name	Site Type	Cultural Affinity
AiHc-79	Colta 1	Findspot	Late Archaic
AiHc-67	Grand Ridge 2	Homestead	Historical Euro-Canadian
AiHc-405	Edworthy Dump III	Refuse Dump	Historical Euro-Canadian
AiHc-404	Edworthy Dump II	Refuse Dump	Historical Euro-Canadian
AiHc-403	Edworthy Dump I	Refuse Dump	Historical Euro-Canadian
AiHc-402	Slater	Homestead	Historical Euro-Canadian
AiHc-401	P12	Findspot	Early Archaic
AiHc-400	P11	Findspot	Archaic
AiHc-399	P8	Findspot	Early Archaic
AiHc-398	P7	Findspot	Woodland
AiHc-397	P6	Campsite	Pre-contact Indigenous
AiHc-396	P5	Findspot	Early Archaic
AiHc-395	P1	Findspot	Middle Archaic
AiHc-330	The Wil Carter Site	Homestead	Historical Euro-Canadian
AiHc-288	N/A	Findspot	Pre-contact Indigenous
AiHc-287	N/A	Findspot	Pre-contact Indigenous
AiHc-286	N/A	Findspot	Middle Archaic
AiHc-285	N/A	Findspot	Middle Archaic
AiHc-284	N/A	Campsite	Pre-contact Indigenous
AiHc-283	N/A	Unknown	Pre-contact Indigenous
AiHc-282	N/A	Campsite	Pre-contact Indigenous
AiHc-281	N/A	Unknown	Pre-contact Indigenous
AiHc-280	N/A	Homestead	Historical Euro-Canadian
AiHc-180	Cedar Street 4	Findspot	Early Archaic
AiHc-179	Cedar Street 3	Findspot	Middle Woodland
AiHc-178	Cedar Street 2	Findspot	Middle Archaic
AiHc-177	Cedar Street 1	Findspot	Middle Archaic

An archaeological assessment was previously completed immediately east of the Site, in advance of the existing housing subdivision. This assessment resulted in the identification of four pre-contact Indigenous findspots (AiHc-79, AiHc-80, AiHc-81 and AiHc-82) (ASI 1988).

An archaeological assessment was previously completed on the property south of the Site, in support of a proposed aggregate pit expansion; this assessment resulted in the identification of one pre-contact Indigenous campsite and six pre-contact Indigenous findspots (AiHc-395, AiHc-396, AiHc-397, AiHc-398, AiHc-399, AiHc-400 and AiHc-401) (ASI 2009).





A third archaeological assessment was previously completed on the property west of the Site, in support of aggregate extraction; this assessment resulted in the identification of four pre-contact Indigenous findspots (AiHc-177 AiHc-178, AiHc-179 and AiHc-180) (ARA 1993).

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 MTCS 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.

### 1.3.7 Assessing Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
  - Primary water sources (lakes, rivers, streams, creeks);
  - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
  - Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
  - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
- Resource areas including:
  - Food or medicinal plants;
  - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
  - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of Euro-Canadian settlement; and,
- Early historical transportation routes.



Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. Finally, extensive land disturbance can eradicate archaeological potential.

In archaeological potential modeling, a distance to water criterion of 300 metres is generally employed for primary water courses, such as lakes, rivers, streams and creeks as well as secondary watercourses, such as intermittent streams and creeks, springs, marshes and swamps.

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. The MTCS also views the presence of previously registered archaeological resources as a prime indicator of archaeological potential.

In recommending a Stage 2 property survey based on determining archaeological potential for a Site, MTCS stipulates the following:

- No areas within 300 metres of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;
- No areas within 100 metres of early transportation routes can be recommended for exemption from further assessment; and,
- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

### 1.3.7.1 Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists states that:

*Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources.*

MTCS 2011:18

The types of disturbance referred to above includes, but is not restricted to, quarrying, sewage and infrastructure development, building footprints and major landscaping involving grading below topsoil.

### 1.3.7.2 Potential for Pre- and Post-Contact Indigenous Archaeological Resources

Following the criteria outlined above in Section 1.3.7 to determine pre- and post-contact Indigenous archaeological potential, a number of factors can be highlighted. Although no stable water sources is located within 300 metres of the Site, the soils of the Site would have been suitable for pre-contact Indigenous agricultural practices. The



Grand River, a major waterway through the area, is located approximately 1.9 kilometres east of the Site. Additionally, 23 archaeological sites yielding pre-contact Indigenous archaeological resources have been identified within one kilometre of the Site.

When the above noted archaeological potential criteria were applied to the Site, the Site exhibits archaeological potential for pre-contact and post-contact Indigenous sites. While areas of previous disturbance eradicate the potential for the recovery of archaeological resources (Section 1.3.7.1), areas of no or low levels of previous disturbance retain their archaeological potential. Map 5 illustrates areas of potential within the Site that were determined to require further Stage 2 assessment.

### ***1.3.7.3 Potential for Historical Euro-Canadian Archaeological Resources***

Following the criteria outlined above in Section 1.3.7 to determine historical Euro-Canadian archaeological potential, several factors can be highlighted. Although the 1861 and 1881 maps of the Site do not illustrate any structures within the Site, the Site is located adjacent to the 19th century historic road grid (Map 2 and Map 3). Additionally, seven archaeological sites yielding historical archaeological resources have been identified within one kilometre of the Site.

When the above noted archaeological potential criteria were applied to the Site, the Site exhibits archaeological potential for historical Euro-Canadian sites. While areas of previous disturbance eliminate the potential for the recovery of archaeological resources (Section 1.3.7.1), areas of no or low levels of previous disturbance retain their archaeological potential. Map 5 illustrates areas of potential within the Site that require Stage 2 assessment.



## **2.0 FIELD METHODS**

### **2.1 Existing Conditions**

The Stage 2 field survey of the Site was conducted on November 7th and 8th, 2016, under archaeological consulting licence P1056, issued to Jamie Lemon of Golder. Mr. Etienne Taschereau (R1087) of Golder acted as the licensed field supervisor and had the duly delegated responsibility for the day-to-day supervision of the archaeological fieldwork at the site, as per Section 12 of the MTCS' 2013 *Terms and Conditions for Archaeological Licences*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*. The weather during the Stage 2 assessment was sunny with sunny temperatures (November 7) and overcast with warm temperatures (November 8). Ground visibility and lighting conditions were excellent and no field conditions were detrimental to the recovery of cultural material. At the time of the Stage 2 survey the Site included predominately cultivated agricultural field that had been weathered by rainfall, and overgrown areas at the south and southeast edges of the field (Map 4).

### **2.2 Field Survey Methods**

The pedestrian survey of the agricultural field was conducted by walking transects of the fields at five metre spacing as stipulated by the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). The ground visibility during the assessment was excellent and ranged from 90 to 95% visibility of topsoil. Upon identification of an archaeological resource, the survey transect was decreased to a one metre-interval spanning a minimum 20-metre radius around the identified artifact. This approach was utilized to establish whether the artifact is an isolated find or if it was part of a larger scatter.

All areas where ploughing was not possible due to ground conditions and tree growth, were subject to test pit assessment at five metre intervals. Each test pit was a minimum of 30 centimetres in diameter and excavated five centimetres into subsoil. All test pit soil was screened through 6mm hardware cloth to facilitate the recovery of artifacts. All test pits were backfilled and returned to grade.

If an artifact was recovered from a test pit the five metre survey interval was maintained to determine the size of the artifact scatter and artifact recovery frequency. If an insufficient number of artifacts were recovered to inform a recommendation for further archaeological assessment, the survey interval was reduced to 2.5 metres around one or more of the positive test pits, and up to eight additional test pit and a single one-metre square unit excavated.

Areas of slope were identified within the Site at the south and south east ends of the field, in the overgrown areas; these areas were photo-documented but were not subject to the Stage 2 test pit survey (Images 4-5).

The soils of the Site were found to be a dark brown sandy loam topsoil over orange-brown sandy-silt topsoil. The average topsoil depth of test pits was 15 centimetres.

All artifacts were recovered and inventoried by find spot locations recorded in the field with a Garmin eTrex 10 handheld GPS, using the North American Datum (NAD) 83, with a minimal accuracy of three metres. 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 5 illustrates the Stage 2 assessment methods and photographic key; Supplement A illustrates the locations of archaeological findspots. Images 1-6 illustrate all aspects of the Stage 2 fieldwork conducted as well as all field



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conditions encountered. Unfortunately a dirt smudge was present on the camera lens that was not noticed until the fieldwork had been completed.



### 3.0 RECORD OF FINDS

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0, above. The Stage 2 archaeological assessment resulted in the recovery of three findspots of pre-contact Indigenous lithic artifacts; all of the findspots were identified during the pedestrian survey. An inventory of the documentary record generated during the archaeological assessment is provided in Table 3.

**Table 3: Inventory of Documentary Record**

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder office in Whitby	5 pages in field book and saved on secure server
Hand Drawn Maps	Golder office in Whitby	2 maps saved on secure server
Maps Provided by Client	Golder office in Whitby	1 map saved on secure server
Digital Photographs	Golder office in Whitby	27 digital photos saved on secure server

### 3.1 Findspot 1

Findspot 1 consisted of a single pre-contact Indigenous projectile point. The projectile point is stylistically similar to a Late Woodland triangular point (circa AD 1400-1650); the broken basal corner makes further identification difficult, however the length of the point suggests it may be Levanna-like. Despite intensification of survey transects at one metre intervals over a 20 metre radius of the findspot no additional artifacts were identified. The projectile point was manufactured on Onondaga chert; one of the basal corners has broken off. Onondaga chert is a high quality raw material that outcrops along the north shore of Lake Erie east of the embouchure of the Grand River. This material can also be recovered from secondary, glacial deposits across much of southwestern Ontario, east of Chatham. The projectile point measures 44.1 millimetres in length, 23.3 millimetres in width and 4.3 millimetres in thickness. Image 7 illustrates the recovered projectile point. Table 4 provides the Stage 2 artifact catalogue for Findspot 1.

**Table 4: Findspot 1 Stage 2 Artifact Catalogue**

Cat. #	Date	Context	Depth	Artifact	Freq.	Comments
1	7-Nov-16	Surface	N/A	Projectile point	1	Onondaga, Levanna-like

### 3.2 Findspot 2

Findspot 2 consisted of a single pre-contact Indigenous hammerstone. Despite intensification of survey transects at one metre intervals over a 20 metre radius of the findspot no additional artifacts were identified. The hammerstone measures 44.5 millimetres in length, 41 millimetres in width and 18.8 millimetres in thickness. Image 8 illustrates the recovered hammerstone. Table 5 provides the Stage 2 artifact catalogue for Findspot 2.



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**Table 5: Findspot 2 Stage 2 Artifact Catalogue**

Cat. #	Date	Context	Depth	Artifact	Freq.	Comments
1	7-Nov-16	Surface	N/A	Hammerstone	1	

### 3.3 Findspot 3

Findspot 3 consisted of a single pre-contact Indigenous biface fragment; the fragment appears to be a base fragment. Despite intensification of survey transects at one metre intervals over a 20 metre radius of the findspot no additional artifacts were identified. The projectile point was manufactured on Onondaga chert; Onondaga chert is a high quality raw material that outcrops along the north shore of Lake Erie east of the embouchure of the Grand River. This material can also be recovered from secondary, glacial deposits across much of southwestern Ontario, east of Chatham. Image 9 illustrates the recovered biface fragment. Table 6 provides the Stage 2 artifact catalogue for Findspot 3.

**Table 6: Findspot 3 Stage 2 Artifact Catalogue**

Cat. #	Date	Context	Depth	Artifact	Freq.	Comments
1	7-Nov-16	Surface	N/A	Biface	1	Onondaga, potential base fragment



## **4.0 ANALYSIS AND CONCLUSIONS**

Following the criteria outlined above in Section 1.3.7 and summarized in Sections 1.3.7.2 and 1.3.7.3 the Site exhibited archaeological potential for pre-contact and post-contact Indigenous sites, as well as historical Euro-Canadian sites.

The Stage 2 survey of the Site resulted in the identification of three pre-contact Indigenous findspots. The findspots included one projectile point, one hammerstone, and one biface fragment. Despite the intensification of survey intervals around each findspot, no additional artifacts were recommended.

The identification of findspots on the Site demonstrates the Site was utilized by pre-contact Indigenous peoples, however the isolated nature of the recoveries suggests habitation areas were located elsewhere; it is more than likely habitation areas are located closer to the Grand River, which would have provided a stable water source and transportation corridor. In addition to the three findspots within the Site, the 23 previously identified pre-contact sites within one kilometre of the Site included 18 findspots, a further indication that while the area was being utilized, habitation areas were located elsewhere. Given the isolated nature of the three pre-contact Indigenous findspots, the cultural heritage value or interest of the Site is considered to be sufficiently documented. Although no further archaeological assessment will be recommended, Location 1 has been registered with the MTCS as AiHc-480, given the find represented a temporally diagnostic artifact.





## **5.0 RECOMMENDATIONS**

Given the isolated nature of the three pre-contact Indigenous findspots, the cultural heritage value or interest of the Site is considered to be sufficiently documented. No further archaeological assessment is recommended for the Site, as illustrated in Map 5.

Despite best efforts and all due diligence, no archaeological assessment can necessarily account for all potential archaeological resources. Should deeply buried archaeological resources be identified during ground disturbance activity associated with future development of the Site, ground disturbance activities should be immediately halted and the Archaeology Division of the Culture Programs Unit of the MTCS notified.

The MTCS is asked to review the results and recommendations presented herein and accept this report into the Provincial Register of archaeological reports. The MTCS is also asked to provide a letter concurring with the results presented herein.



## **6.0 ADVICE ON COMPLIANCE WITH LEGISLATION**

This report is submitted to the Ontario Minister of Tourism, Culture and Sport 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 Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

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

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering 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 remains 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.



## **7.0 BIBLIOGRAPHY AND SOURCES**

Anderson, Jacob

2009 *The Lawson Site: An Early Sixteenth Century Neutral Iroquoian Fortress*. Museum of Ontario Archaeology, Special Publication No. 2. London.

ARA (Archaeological Research Associates)

1993 *An Archaeological Assessment of Cedar Street Pit, Lots 15 & 16, Concession 10, North Dumfries Township*. R.M. of Waterloo. Report on file with MTCS, Toronto.

ASI (Archaeological Services Inc.)

1988 *An Archaeological Resource Assessment of Cedar Heights Phase II 30T-78014, City of Cambridge, Regional Municipality of Waterloo*. Report on file with MTCS, Toronto.

2009 *Stage 1 and 2 Archaeological Assessment and Built Heritage and Cultural Landscape Assessment of the Proposed Expansion of the Cambridge Edworthy Pit, Township of North Dumfries*. Report on file with MTCS, Toronto.

Burse, Jeffrey

1995 The Transition from the Middle to Late Woodland Periods: A Re-Evaluation. In: *Origins of the People of the Longhouse: Proceedings of the 21<sup>st</sup>, Annual Symposium of the Ontario Archaeological Society*, André Bekerman and Gary Warrick (eds.), pp. 43-54. Ontario Archaeological Society, Toronto.

Chapman, Lyman John and Donald F. Putnam

1984 *The Physiography of Southern Ontario*. 3rd edition. Ontario Geological Survey Special Volume 2. Ontario Ministry of Natural Resources, Toronto.

Crawford, Gary, David Smith and Vandy Bowyer

1997 Dating the entry of corn (*Zea mays*) into the Lower Great Lakes region. *American Antiquity* 62(1):112-119.

Dodd, Christine F., Dana R. Poulton, Paul A. Lennox, David G. Smith and Gary A. Warrick

1990 The Middle Ontario Iroquoian Stage. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 321-360.

Ellis, Chris J. and D. Brian Deller

1990 Paleo-Indians. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 37-64.



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---

Ellis, Chris J. and Neal Ferris (editors)

1990 *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5.

Ellis, Chris, Ian T. Kenyon and Michael W. Spence

1990 The Archaic. In: *The Archaeology of Southern Ontario to A.D. 1650*, Chris J. Ellis and Neal Ferris (eds.), Occasional Publication of the London Chapter, Number 5. Ontario, pp. 65-124.

Ferris, Neal

2009 *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. University of Arizona Press, Tucson.

Ferris, Neal and Michael Spence

1995 The Woodland traditions in southern Ontario. *Revista de Arqueología Americana* 9:83-138.

Fox, William

1990 The Middle Woodland to Late Woodland Transition. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 171-188.

Government of Ontario

1990a Ontario Heritage Act, R.S.O., c. O.18. Electronic document: [http://www.elaws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_90o18\\_e.htm](http://www.elaws.gov.on.ca/html/statutes/english/elaws_statutes_90o18_e.htm) (retrieved February 11, 2016).

1990b Ontario Aggregate Resources Act, R.S.O. 1990, c. A.8. Electronic document: <https://www.ontario.ca/laws/statute/90a08> (retrieved November 14, 2016).

Lennox, P. A. and Fitzgerald, W.R.

1990 The Culture History and Archaeology of the Neutral Iroquoians. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 405-456.

Luedtke, Barbara

1992 *An Archaeologist's Guide to Chert and Flint: Archaeological Research Tools* 7. UCLA Institute of Archaeology: Los Angeles.

Martin, Scott

2004 [2007] Lower Great Lakes Region Maize and Enchainment in the First Millennium AD. *Ontario Archaeology* 77/78:135-159.

Morris, J.L.

1943 *Indians of Ontario*. 1964 reprint. Department of Lands and Forests, Government of Ontario.

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## STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT - PROPOSED CBM DANCE PIT EXTENSION

---

MTCS (Ministry of Tourism, Culture and Sport)

2011 *Standards and Guidelines for Consultant Archaeologists*. Ministry of Tourism, Culture and Sport, Culture Division, Programs and Services Branch, Culture Programs Unit, Toronto.

2016 *Ontario Archaeological Sites Database*. Ministry of Tourism, Culture and Sport, Culture Division, Programs and Services Branch, Culture Programs Unit, Toronto. Accessed November 2, 2016.

Parsell, H. and Company

1881 *Illustrated Atlas of the County of Waterloo*. H. Parcell, Toronto.

Pearce, Robert J.

2010 *Southwestern Ontario: The First 12,000 Years*. Electronic Document: <http://www.diggingontario.uwo.ca>.

Presant, E.W. and R.E. Wicklund

1971 *The Soils of Waterloo County*. Report No. 44 of the Ontario Soil Survey, Research Branch, Canada Department of Agriculture and the Ontario Department of Agriculture and Food.

Ritchie, William

1971 *A Typology and Nomenclature for New York Projectile Points*. Revised Edition. New York State Museum and Science Service, Bulletin Number 384. The University of the State of New York, The State Education Department, Albany, New York.

Schmalz, Peter S.

1991 *The Ojibwa of Southern Ontario*. University of Toronto Press.

Smith, David G.

1990 *Iroquoian Societies in Southern Ontario: Introduction and Historic Overview*. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 279-290.

Spence, Michael, Robert Pihl and Carl Murphy

1990 *Cultural Complexes of the Early and Middle Woodland Periods*. In *The Archaeology of Southern Ontario to AD 1650*, edited by Christopher Ellis and Neal Ferris, pp. 125-169. Occasional Papers of the London Chapter, Ontario Archaeological Society, No. 5. Ontario Archaeological Society, London.

Stothers, D.M. and R.A. Yarnell

1977 *An Agricultural Revolution in the Lower Great Lakes*. In *Geobotany*, edited by R.D. Romans, pp. 209-232. Plenum Press, New York.

Tremaine, George R.

1861 *Map of the County of Waterloo*.

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## STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT - PROPOSED CBM DANCE PIT EXTENSION

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Williamson, Ronald F.

1990 The Early Iroquoian Period of Southern Ontario. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 291-320.



## **8.0 IMAGES**



*Image 1: Pedestrian survey condition, facing north-northwest*



*Image 2: Pedestrian survey at five metre interval, facing north-northwest*



## STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT - PROPOSED CBM DANCE PIT EXTENSION



*Image 3: Intensification of pedestrian survey intervals, facing north-northwest*



*Image 4: Test pit survey at five metre interval, area of slope in background, facing east*





## STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT - PROPOSED CBM DANCE PIT EXTENSION



*Image 5: Test pit survey at five metre interval, areas of slope on left, facing east-northeast*



*Image 6: Excavated test pit, facing north*



*Image 7: Findspot 1 recovered artifact, scale as indicated*



*Image 8: Findspot 2 recovered artifact, scale as indicated*

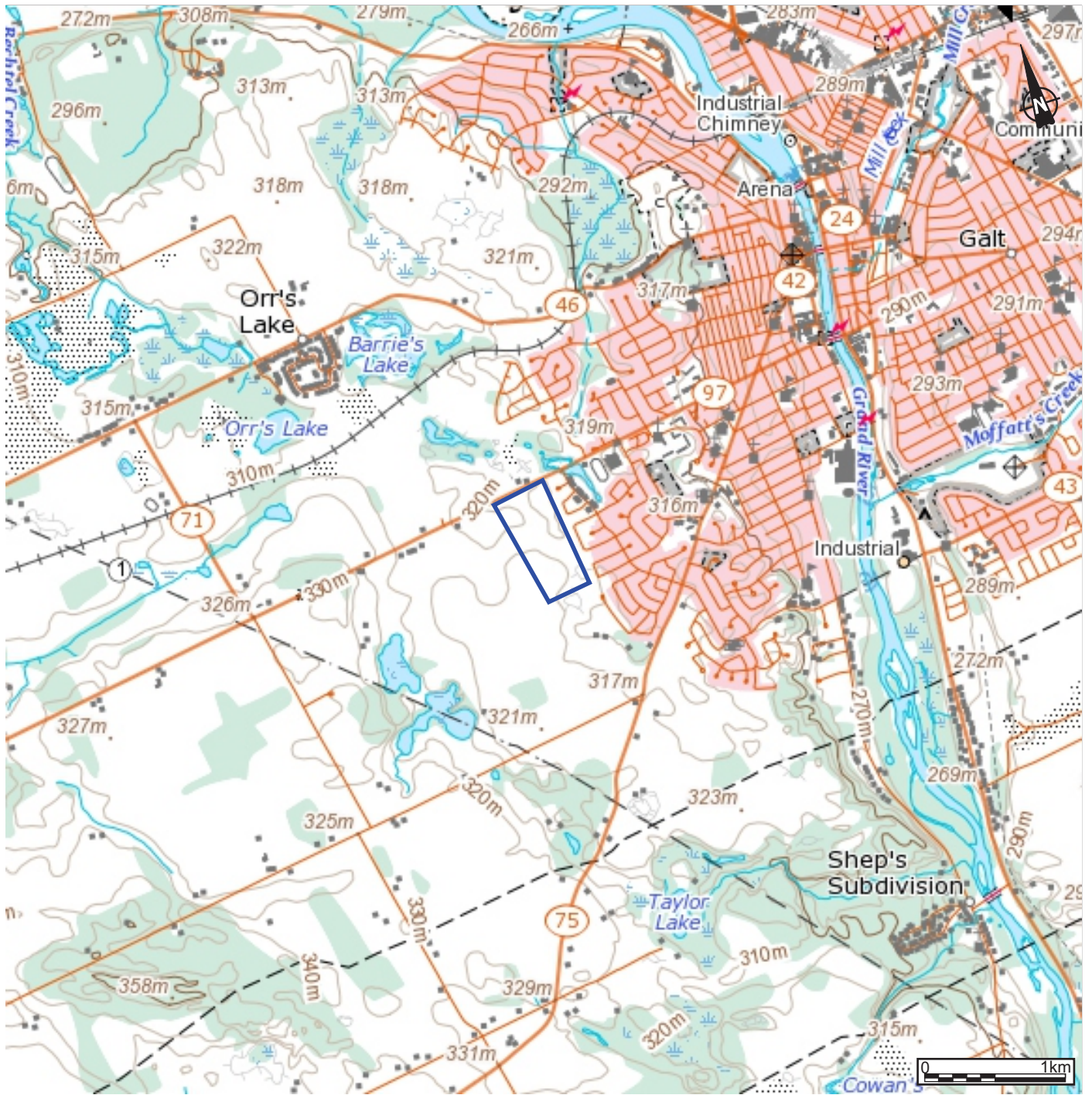


*Image 9: Findspot 3 recovered artifact, scale as indicated*



## **9.0 MAPS**

All mapping follows on succeeding pages.



**LEGEND**

 -Project Area

**REFERENCE**

DRAWING BASED ON NATURAL RESOURCES CANADA 2016

**NOTES**

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

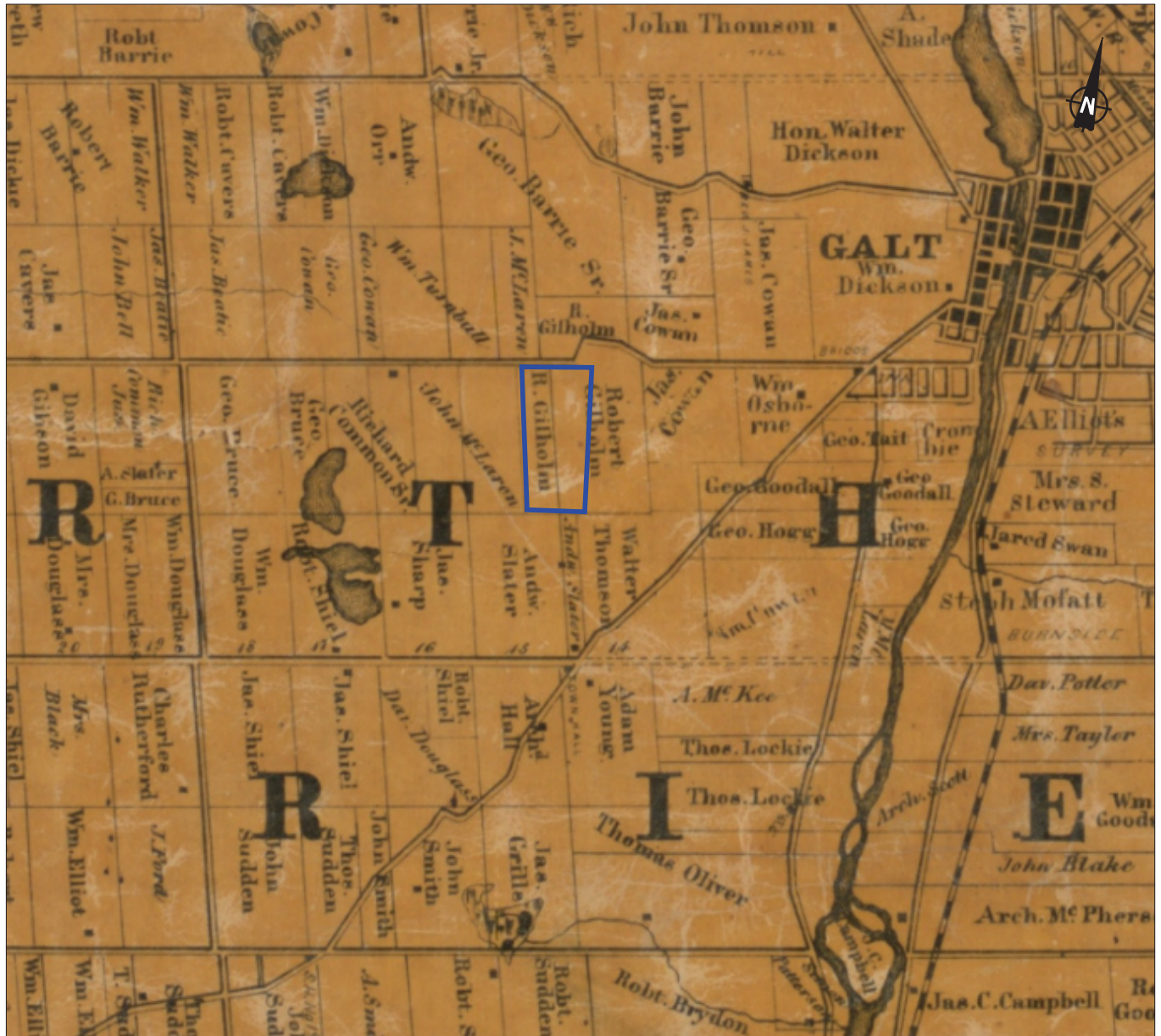
ALL LOCATIONS ARE APPROXIMATE.

**PROJECT** Stage 1 and 2 Archaeological Assessment  
**CBM Dance Pit**  
 Township of North Dumfries, Ontario

**TITLE**  
 Location of Site



PROJECT No.	1653019	FILE No.	1653019-4000-R01001
CADD	JL	Nov. 10/16	SCALE As shown REV.
CHECK	CP		<b>Map 1</b>



**LEGEND**

 -Project Area

**REFERENCE**

DRAWING BASED ON PARSELL AND CO. 1881

**NOTES**

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


ALL LOCATIONS ARE APPROXIMATE.

PROJECT				<b>Stage 1 and 2 Archaeological Assessment CBM Dance Pit Township of North Dumfries, Ontario</b>			
TITLE				<b>A Portion of the 1861 Tremaine's Map of Waterloo County</b>			
PROJECT No.		1653019		FILE No.		1653019-4000-R01002	
CADD		JL		SCALE		Not to scale REV.	
CHECK		CP		Nov. 10/16		<b>Map 2</b>	





**LEGEND**

 -Project Area

**REFERENCE**

DRAWING BASED ON PARSELL AND CO. 1881

**NOTES**

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

ALL LOCATIONS ARE APPROXIMATE.

PROJECT				<b>Stage 1 and 2 Archaeological Assessment CBM Dance Pit Township of North Dumfries, Ontario</b>			
TITLE				<b>A Portion of the 1881 Map of the Township of North Dumfries</b>			
PROJECT No.		1653019		FILE No.		1653019-4000-R01003	
CADD		JL		Nov. 10/16		SCALE Not to scale REV.	
CHECK		CP				<b>Map 3</b>	





**LEGEND**

 -Project Area

**REFERENCE**

DRAWING BASED ON GOOGLE EARTH 2016

**NOTES**

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ALL LOCATIONS ARE APPROXIMATE.






PROJECT		<b>Stage 1 and 2 Archaeological Assessment CBM Dance Pit Township of North Dumfries, Ontario</b>	
TITLE			
<b>Aerial Image of Site</b>			
PROJECT No.	1653019	FILE No.	1653019-4000-R01004
CADD	JL	Nov. 10/16	SCALE As shown REV.
CHECK	CP		<b>Map 4</b>







**LEGEND**

-  -Project Area
-  -Area of Archaeological Potential, Stage 2 Pedestrian Survey at 5m Intervals
-  -Area of Archaeological Potential, Stage 2 Test Pit Survey at 5m Intervals
-  -Area of Slope, No Stage 2 Survey Undertaken
-  -Photo Location and Direction

**REFERENCE**

DRAWING BASED ON GOOGLE EARTH 2016, FIELD DIRECTOR'S NOTES

**NOTES**

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

ALL LOCATIONS ARE APPROXIMATE.

PROJECT **Stage 1 and 2 Archaeological Assessment  
CBM Dance Pit  
Township of North Dumfries, Ontario**

TITLE **Stage 2 Assessment Methods and  
Photographic Key**



PROJECT No.	1653019	FILE No.	1653019-4000-R01005
CADD	JL	Nov. 10/16	SCALE As shown REV.
CHECK	CP		<b>Map 5</b>



## **10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT**

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## Report Signature Page

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Associate, Senior Archaeologist

JLL/CP/lb

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