ORIGINAL REPORT

Stage 1 Archaeological Assessment

Almonte Quarry Expansion, Part Lot 15, Concession 11, Huntley Township, Carleton County, Ontario

PIF Number: P328-021-2018
Licensee: Lindsay Dales (P328)

Submitted to:

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Executive Summary

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

Golder Associates Ltd. was retained by Thomas Cavanagh Construction Limited to undertake a Stage 1 archaeological assessment for a proposed expansion to Almonte Quarry of Part of Lot 15, Concession 11, Geographic Township of Huntley, Carleton County, Ontario.

The objectives of this assessment were to identify known archaeological sites and resources on and within the vicinity of the study area, to assess the archaeological potential of the property under investigation, to determine the impact of the proposed development on any potential archaeological resources within the landscape and to provide recommendations as to whether any additional archaeological investigations are required.

There is evidence of human occupation of Eastern Ontario dating from 9,000 BP (Before Present) following the retreat of the Champlain Sea. Based upon the existing data, the study area first became available for human occupation in the late Paleo-Indian Period or early in the Archaic Period (7,000 BP).

In 1818, Huntley Township was surveyed, and the first settlers arrived to settle the area surrounding the Carp River Valley in 1819. The eastern part of the township was quickly settled but most of the lots in the Huntley Township remained largely rural through the nineteenth and most of the twentieth century. The 1863 Walling map does not list an owner for Lot 15, Concession 11 in Huntley Township. The 1879 Belden map lists C. Mahoney Sr. as the owner of the western half of Lot 15 but land registry records show the study property was not granted by the Crown until around 1886 to Bridget Mahoney. The western half of Lot 15 remained in the Mahoney family during the remainder of the 19th century.

An inspection of the study area was completed on June 26, 2018, in clear sunny conditions with a temperature of 26°C. This visual inspection identified undisturbed woodlots, a large shallow seasonal wetland and an area of exposed bedrock. The visual inspection also identified extensive disturbance from activities related to the adjacent quarry including the construction of roadways with large berms and a graded open area containing rock piles.

The documentary evidence, including the historic maps and census records, do not indicate any settlement, structures or activity within study area during the nineteenth century. Attributes identifying archaeological potential within the study area were the proximity of the seasonal wetland and historic transportation route (present day March Road).

Based on the archaeological potential for material cultural resources identified within the study area, this investigation has provided the basis for the following recommendations (Map 7):

1) All undisturbed land in the study property, approximately 29 acres (11.8 hectares), should be archaeologically investigated with hand excavated test pits in five metre intervals to the depth of at least 5 centimetres into natural *in situ* subsoil.

2) No further archaeological investigation is required within the remaining disturbed land in the study area approximately 19 acres (7.7 hectares), as depicted on (Map 7) and as a consequence that the Ministry of Tourism, Culture, and Sport issue a letter concurring that no additional archaeological investigations are required for this area.

This report is submitted to the Ministry 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. 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the archaeological field work and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

The MTCS is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

Project Personnel

Client Contact	Phil White, Thomas Cavanagh Construction Limited
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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. was retained by Thomas Cavanagh Construction Limited to undertake a Stage 1 archaeological assessment for a proposed expansion to Almonte Quarry, measuring 48 acres (19.5 hectares) in size, on Part of Lot 15, Concession 11, Geographic Township of Huntley, Carleton County, Ontario. The study area is located at 4078 March Road, near the intersection of March Road and Upper Dwyer Hill Road, City of Ottawa, Ontario (Map 2).

The assessment was triggered by the *Aggregate Resource Act* which requires archaeological concerns to be address in connection with any licenses to open or expand an aggregate operation. Aggregate Resource Policy 2.01.08 (March 15, 2006) requires archaeological assessments to be completed for the whole property, not just the areas of extraction if the property has archaeological potential

This study included the review of available archaeological and environmental literature relevant to the property, consultation with the Ministry of Tourism, Culture and Sport's database of registered archaeological sites, as well as a review of primary historic documentation including land abstract records, census documentation, aerial photographs and historic maps.

1.2 Objectives

This Stage 1 archaeological assessment was completed to identify known archaeological resources on or in the vicinity of the study area, as well as to assess the archaeological potential of the study area. The objectives of a Stage 1 investigation are based on principles outlined in the *Ontario Heritage Act* (consolidated 2007) and the Ontario Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consulting Archaeologists* (2011). More specifically, this Stage 1 Archaeological Assessment was completed with the following objectives:

- To provide information about the study area's geography, environment, cultural history, previous archaeological fieldwork and current land condition;
- To evaluate in detail the property's archaeological potential, which will support recommendations for Stage 2 surveys for all or parts of the property; and,
- To recommend appropriate strategies for Stage 2 field surveys.

1.3 Historic Context

1.3.1 Pre-contact History

Human occupation of southern Ontario dates back approximately 12,000 years before present (BP). These first peoples, known as Paleo-Indians, moved into Ontario as the last of the glaciers retreated northward. The former shores of vast glacial lakes such as Lake Algonquin, in the area that is now southern Georgian Bay, and along the north shore of present-day Lake Ontario, have provided evidence of their presence. Isolated finds of the distinctive, parallel-flaked Paleo-Indian spear points have been recorded in the Rideau Lakes and north of Kingston (Watson 1982; Heritage Quest Inc. 2000). Although there is limited information on the lifestyle of the Paleo-Indians, what little evidence that is available suggests that they were highly mobile hunters and gatherers relying on caribou, small game, fish and wild plants found in the sub-arctic environment.

The Ottawa Valley remained very much on the fringe of occupation at this time. The ridges and old shorelines of the Champlain Sea and early Ottawa River channels are the areas most likely to contain evidence of Paleo-Indian occupation in this region. Isolated finds of fluted points (laurel leaf shaped points with a channel flake scar extending from the base of the point) have been recorded in the Rideau Lakes area (Watson 1982) and Kingston (Heritage Quest Inc. 2000). Ken Swayze has found what he believes to be Paleo-Indian material near Greenbank Road (Kinickinick Heritage 2003) and possibly at Albion Road and Rideau Road (Kinickinick Heritage 2004).

It was not until the succeeding Archaic Period (ca. 9,000 to 3,000 B.C.), that the environment of southern Ontario approached modern conditions. While more land became available for occupation as the glacial lakes drained, Archaic populations continued as hunter-gatherers, however they appear to have focused more on local food resources, abandoning the highly mobile lifestyle of their predecessors. Although the capable Paleo-Indian workmanship of stone tools was lost, the Archaic Period tool kit became more diversified, reflecting the change to a temperate forest environment. Ground stone tools such as adzes and gouges first appeared and may indicate the construction of dug-out canoes or other heavy wood working activities. Extensive trade networks had developed by the middle to late Archaic Period. Items such as copper from the north shore of Lake Superior were exchanged during this time.

The first significant evidence for occupation in the Ottawa Valley appears at this time. An Early Archaic Dovetail Point was recovered 100 years ago in Ottawa south (Pilon & Fox 2015). Archaic sites have been identified on Allumettes and Morrison Islands on the Ottawa River near Pembroke, and within the boundaries of Leamy Lake Park within the City of Gatineau (Pilon 1999: 43-53, 64). Late Archaic sites have also been identified to the west in the Rideau Lakes, and the east at Jessup Falls and Pendleton along the South Nation River (Daechsel 1980). A few other poorly documented finds of Archaic artifacts have been made within the City limits (Jamieson 1989). Sites at Honey Gables and at Albion Road and Rideau Road have been documented and appear to contain Early Archaic material (Kinickinick Heritage 2004).

The Woodland Period (ca. 3,000 to 400 BP) is distinguished by the introduction of ceramics. Early Woodland groups continued to live as hunters, gatherers and fishers in much the same way as earlier populations had done. They also shared an elaborate burial ceremonialism evidenced by the inclusion of exotic artifacts within graves (Spence et al. 1990: 129). Extensive trade networks continued through the early part of this period and Early Woodland populations in Ontario appear to have been heavily influenced by groups to the south, particularly the Adena people of the Ohio Valley. By 1,700 BP, the trade networks had reached their peak and covered much of North America.

Through the Middle Woodland Period (ca. 2,400 to 1,100 BP) there was an increase in the decorative styles found on ceramic pots and changes in the shapes and types of tools used. For the first time, it is possible to identify regional cultural traditions within the province, with “Point Peninsula” being the distinctive variant found in eastern and south-central Ontario. A greater number of known sites from this period have allowed archaeologists to develop a better picture of the seasonal round followed in order to exploit a variety of resources within a home territory. Through the late fall and winter, small groups would occupy an inland “family” hunting area. In the spring, these dispersed families would congregate at specific lakeshore sites to fish, hunt in the surrounding forest, and socialize. This gathering would last through to the late summer when large quantities of food would be stored for the approaching winter. The proliferation of sites suggests an increase in the population of Eastern Ontario, although the Ottawa area has yet to yield as many sites as other parts of south-eastern Ontario. Middle Woodland sites have been noted in the South Nation Drainage Basin and along the Ottawa River including the northwest end of Ottawa at Marshall’s and Sawdust Bay (Daechsel 1980; Daechsel 1981), as well as at Leamy Lake and along the Rideau River.

Another significant development of the Woodland Period was the appearance of domesticated plants ca. 1,450 BP. Initially only a minor addition to the diet, the cultivation of corn, beans, squash, sunflowers and tobacco gained economic importance for Late Woodland peoples. Along with this shift in subsistence, settlements located adjacent to the corn fields began to take on greater permanency as sites with easily tillable farmland became more important. Eventually, semi-permanent and permanent villages were built, many of which were surrounded by palisades, evidence of growing hostilities between neighbouring groups. By the end of the Late Woodland Period, distinct regional populations occupied specific areas of Southern Ontario separated by vast stretches of largely unoccupied land, including the Huron along the north shore of Lake Ontario, and the St. Lawrence Iroquois along the St. Lawrence River.

While there is clear evidence of these latter developments in much of southern Ontario, the Ottawa Valley remained a sparsely occupied region utilized by mobile hunter-gatherers. In part, this was because the terrain was less than suitable for early agriculture. It was also a reflection of the increased pressure on hunting territories and conflict over trade routes at the end of the Woodland Period. Facing persistent hostilities with Iroquoian populations based in what is now New York State, the Huron moved from their traditional lands on the north shore of Lake Ontario to the Lake Simcoe and Georgian Bay region. Algonquin groups, who had occupied the lands north of the Huron, also appear to have retreated further northward in order to place greater distance between themselves and the Iroquois.

Woodland sites have been recorded throughout the Ottawa Valley. A site with artifacts ranging from the Late Archaic to the Late Woodland was documented on the shores of the Rideau River (Fisher Archaeological Consulting 2010). Two small Late Woodland sites were also identified on a property near the Village of Cumberland (Ferris 2002). A significant Woodland occupation has been identified at the Leamy Lake site (Pilon 1999: 76-80). Finally, an ossuary burial identified near the Chaudière Falls in the 1840s, dates to this period.

Although ossuaries are a burial practice normally associated with Iroquoian speaking populations, especially the Huron, this internment may have been Algonquin. Once again, a number of poorly documented Woodland find spots are known for the general project area (Jamieson 1989).

1.3.2 Post Contact History

Samuel de Champlain was the first European to document his explorations of the Ottawa Valley, initially in 1613 and again in 1615. He was preceded, however, by two of his emissaries, Etienne Brule around 1610 and Nicholas de Vigneau in 1611. It is likely that all three travelled at least the lower reaches of the Rideau River.

In the wake of Champlain's voyages, the Ottawa River became the principal route for explorers, missionaries and fur traders travelling from the St. Lawrence to the interior, and throughout the seventeenth and eighteenth centuries this route remained an important link in the French fur trade.

At the time of initial contact, the French documented three Algonquin groups residing in the vicinity of the project area (Heidenreich & Wright 1987: Plate 18). These included the Matouweskarini along the Madawaska River to the west, the Onontchataronon in the Gananoque River basin to the southwest, and the Weskarini, the largest of the three, situated in the Petite Nation River basin. While prolonged occupation of the region may have been avoided as a result of hostilities with Iroquoian speaking populations to the south, at least the northern reaches of the South Nation River basin were undoubtedly used as hunting territories by the Algonquin at this time.
The recovery of European trade goods (i.e. iron axes, copper kettle pieces and glass beads) from aboriginal sites throughout the Ottawa River drainage basin has provided evidence of the extent of contact between aboriginals and the fur traders during this period. The English, upon assuming possession of New France, continued to use the Ottawa River as an important transportation corridor.

Significant European settlement of the region did not occur until United Empire Loyalists and other immigrants began to move to lands along the Ottawa River in the late eighteenth and early nineteenth centuries. The need for land on which to settle the Loyalists led the British government into hasty negotiations with their indigenous military allies, the Mississauga, who were assumed, erroneously, to be the only Aboriginal peoples inhabiting eastern Ontario. Captain William Redford Crawford, who enjoyed the trust of the Mississauga chiefs living in the Bay of Quinte region, negotiated on behalf of the British government. In the so-called “Crawford Purchase,” the Mississauga were persuaded into giving up Aboriginal title to most of eastern Ontario, including what would become the counties of Stormont, Dundas, Glengarry, Prescott, Russell, Leeds, Grenville and Prince Edward, as well as the front Townships of Frontenac, Lennox, Addington and Hastings and much of what is now the City of Ottawa (including the Geographic Townships of Gloucester, Nepean, Osgoode, Marlborough and North Gower) (Lockwood 1996: 24). In 1793, after the Province of Quebec was divided into Upper and Lower Canada (in 1791), John Stegmann, the Deputy Surveyor for the Province of Upper Canada, undertook an initial survey of four Townships (Nepean, Gloucester, North Gower and Osgoode) on both sides of the Rideau River near its junction with the Ottawa River.

Commonly acknowledged as the first permanent European resident in the Ottawa area, Philemon Wright settled in Hull Township with five families and 33 men in 1800 (Bond 1984: 24). The community along the north shore of the Ottawa River grew over the next few years and by 1805 Wright had begun significant lumbering activity in the region.

The scarcity of roads and poor state of transportation beyond the Ottawa River shoreline slowed settlement in many parts of the Ottawa Valley (Belden 1879); although with the construction of the Rideau Canal (1827 - 1832) the new settlement of Bytown experienced its first major growth in population. This resulted in the development of two areas: Lower Bytown east of the Canal, primarily populated by French Canadian and Irish labourers and merchants, and Upper Bytown to the west with a predominantly white Anglo-Saxon Protestant population. Bytown was incorporated as the City of Ottawa on January 1, 1855, with a population of 10,000. The selection of Ottawa as the capital of Canada in 1857 was the major catalyst in the subsequent development of the city.

1.3.2.1 Huntley Township History

There are several accounts on the early settlement of Huntley Township, including Belden’s *Illustrated Historical Atlas of Carleton County* (Belden 1879), *Beginnings, A Brief History of Huntley Township: 1819-1930* (Huntley Township Historical Society 2001), *Carleton Saga* (Walker and Walker 1968) and *The Origins and Early History of Carp Village* (Elliott 2003).

In 1818, Huntley Township was surveyed, and the first settlers arrived to settle the area surrounding the Carp River Valley in 1819. The first road in Huntley Township, the Third Line, was laid out in 1820 by Henry McBride and Denis Cavanaugh, Township Road Commissioners and was the main road from Pakenham via Carp and Stitt’s Corner south to Richmond and on to Kemptville by mid-century (Elliott 2003: 5).

In the early 1820s, the first major influx of Protestant Irish settlers arrived in the township from the counties of Tipperary, Cavan, Fermanagh and Tyrone. They settled along the Third Line, forming the nucleus of the hamlet of Huntley (HTHS 2018). In the later 1820s, Irish Catholic families, mainly from County Cork, settled around the Old Almonte Road and Corkery Road (Ninth Line Huntley) where the hamlets of Manion Corners, Powell and Clandeboye developed (HTHS 2018).

The eastern part of Huntley was settled quickly with the main business centre located along the Third Line at a junction that was sometimes called Huntley Corners. At Huntley Corners, Arthur Hopper opened a store in 1836 in which the Huntley Post Office began operating in 1837 (Walker & Walker 1968: 441). In 1838, Christ Church (Anglican) was built diagonally across the road from Hopper’s store and a school was erected beside it at some

point (Elliott 2003: 5-6). In 1842 the Presbyterians built a log church on the northeast corner of the junction. By 1851, Huntley Corners also boasted a tavern, two blacksmiths, a shoemaker and tannery (Elliott 2003: 7). Much of the western part of Huntley was supplied by the Village of Almonte, with the closest post office (Powell) located three miles east of the village. The Powell post office was also marked as the site of a hotel and store (Belden 1879: 42; Walling 1863). By 1841, roads had been extended east from Almonte through Huntley Township to March Township (LAC NMC 17853).

By the 1861 census, Carp in 1844, had grown to include three inns, three blacksmiths, four merchants, a shoemaker, a harness maker, a wagon maker and a tailor. All of the buildings were log – except for a frame store and the blacksmith's frame house (Walker & Walker 1968: 453). By 1879, Carp had two telegraph offices, two hotels, four general stores, a steam grist and flouring mill, a cabinet shop, a carriage shop, two blacksmith shops, two harness shops, a tin and stove store, two shoe shops, a tailor shop, three milliner shops, two butcher shops, a bakery, a cheese factory, brick town hall, Orange Hall, and a school (Belden 1879: xlii).

J.R. Booth's Ottawa, Arnprior, and Parry Sound Railway (O.A. & P.S.) was the first railway constructed through the township. In 1892, land to the southwest of Carp was purchased for tracks and the first passenger train arrived in 1893. The O.A. & P.S. was merged into Booth's Canada Atlantic Railway in 1895 and then into the Grand Trunk Railway in 1905 (Elliott 2003: 43).

In 1974, Huntley Township was amalgamated with Torbolton and Fitzroy Townships to form West Carleton Township and later became part of the expanded City of Ottawa in 2001 (HTHS 2018).

1.3.2.2 Property History

Historic maps (Map 3) and aerial photographs (Map 4) provide property specific information for the study area. Most of the lots in the Huntley Township remained largely rural through the nineteenth and most of the twentieth century.

The 1863 Walling map illustrates a road from Almonte to Carp running along the northwest side of Lot 15, Concession 11, in Huntley Township. No occupants are listed, or structures are shown on Lot 15 in the 1863 Walling map. The 1879 Belden map lists a C. Mahoney Sr. as the owner of Lot 15, Concession 11 but no structures are shown indicating that no one was living on Lot 15. Mr. Mahoney Sr. was listed as an Irish farmer/post master and may have lived on the southwestern 50 acres of Lot 18, Concession 11 in a structure labeled as Post Office/Hotel. There is a discrepancy with the 1879 Belden map and the land registry records which lists the Crown patent for the west half (100 acres) to a Bridget Mahoney in 1884 or 1886 (I-3939). Neither C. Mahoney and Bridget Mahoney are listed in the 1871, 1881 or 1891 census returns, indicating that they may have been absentee owners. In 1902, Bridget Mahoney sold the western half of Lot 15 to Lawrence McGrath(?).

The lot was subsequently purchased by several different owners over the 20th century. In 1971, Thomas Cavanagh purchased the western half of Lot 15 for $18,000 (I-145351).

1.4 Archaeological Context

1.4.1 Study Area Environment

The study area is situated near the western edge of the Smith Falls Limestone Plain physiographic region which consists of a level plain with generally shallow soils over limestone bedrock belonging to the Ottawa Formation. Some relief is provided by low ledges and shallow valleys in the rock with more faulting and clay deposits associated with the portion of the plain north of Carleton Place (Chapman & Putnam 1984: 196-197). The surficial geology is flat lying limestone plain consisting of dolomite, sandstone and shale with outcrops (Chapman & Putnam 1984). The rock is composed predominantly of grey, fossiliferous, bioclastic, fine to medium grained limestone with dark grey and black shaly partings. This limestone was used as a building stone in the past but presently is quarried only for crushed stone (Hill et al.1974).

The study area lies within the Ottawa Valley Clay Plains (Chapman & Putnam 1984: 205-208), a physiographic region spanning from Pembroke to Hawkesbury. The clay plains are interrupted by ridges of sand or rock and east of the City of Ottawa, the clay is finer textured than the plains to the west. The study area contains Farmington Loam soils which consists of thin soils over limestone bedrock, with large areas of bare rock. These soils have been identified as gently undulating, with stoniness ranging from moderately stony to exceedingly stony. The irregularity of the exposed bedrock and the shallowness of the loam (less than 30.5 cm thick) make the thin soils problematic for most farming practices. Farmington Loam has moderate to excessive drainage and is best suited for periodical pasture or forestry use (Hoffman, Miller & Wicklund 1967: 25).

The study area lies between the Middle Ottawa and Upper St. Lawrence sub-regions of the Great Lakes-St. Lawrence Forest Region, characterized by mixed coniferous and deciduous tree species. The upland forest of the Middle Ottawa is comprised of sugar maple, beech, yellow birch, red maple and eastern hemlock, almost always accompanied by eastern white and red pine. There are smaller amounts of white spruce, balsam fir, trembling aspen, white birch, red oak, and basswood present throughout the sub-region. Hardwood are common and mixed wood swamps with eastern white cedar, tamarack, black spruce, black ash, red maple and elm thrive. Much less common are butternut, bitternut hickory, burr oak, white ash and black cherry (Rowe 1972: 100-105).

The Ottawa River is located approximately 23 km to the northeast and the Mississippi River which runs through Almonte, Ontario is approximately 6 km to the southwest. There are several small creeks located more than 300 m to the north and south of the study area.

1.4.2 Site Inspection

An inspection of the study area was completed on June 26, 2018, in clear sunny conditions of sun with a temperature of 26°C. The subject property was accessed and visually inspected through a series of gravel roadways, with no limitations or restrictions. Permission to access the property was provided by Phil White, Thomas Cavanagh Construction Ltd. Map 5 provides the location and direction of each photograph documented in this report and a photographic catalogue is provided as Appendix A.

The study area contained a relatively flat topography, with pockets of dense cedar and pine forest. The wooded areas contained moss-covered ground surface and sandy soils (Images 1 and 2, p.18). A large undisturbed shallow seasonal wetland with rich dark peaty/loam soils with dead fallen trees was observed extending from the north into the central portion of the study area.

An area of exposed bedrock with minimal grass coverage was noted in the central section of the study area (Images 6 and 7, pp.20 and 21). The central and southeastern portion of the study area contained pockets of undisturbed woodlot with shallow sandy soils, birch trees and fern ground cover (Images 13 and 14, p.24).

A great deal of disturbance related to activities from the adjacent quarry was noted in the central and southern portions of the study area. The main road cuts northeast to southwest across the central section before turning to follow the western boundary to the southwest corner of the study area. The gravel roadway was graded during construction and large berms, approximately 4 to 6 metres were built along each side (Image 5, p.20). A small graded gravel roundabout was noted along the northeast boundary near the entrance to the roadway.

A large open area in the southwest shows evidence of disturbance from stripping and grading activities during the construction of the roadway, berms and open cleared area containing large rock piles (Images 8 to 12, pp.21 to 23).

1.4.3 Previous Archaeology

Archaeological Assessments from the MTCS's Archaeological Sites Database (ASDB) were retrieved on June 6, 2018. Past Recovery Archaeological Services (2014) conducted a Stage 1 archaeological assessment of the Burnt Lands Provincial Park. The southern portion of the Burnt Lands Provincial Park study area was located to the west, on Part Lot 15, Concession 12, Huntley Township, less than 100m from the current study area. A Stage 2 investigation was recommended prior to any proposed development. The current study area does not contain the same characteristics that indicate archaeological potential in the Burnt Lands Provincial Park report. The Burnt Lands Provincial Park recommendations were based on the presence of glaciofluvial deposits relating to a past shoreline of the Champlain Sea, proximity to several watercourses, elevated topography and documentation of Euro-Canadian settlement.

A selection of archaeological assessments in Huntley County are listed in Table 1.

Table 1: Selection of Previous Archaeological Assessment Studies in Huntley Township.

PIF#	Date	Title	Consultant
P111-0055-2017	2017	Stage 1 Archaeological Assessment 2113 – 2125 Carp Road Part Lot 2, Concession 3, Geographic Township of Huntley, Carleton County, Now City of Ottawa, Ontario	Past Recovery Archaeological Services
P369-0029-2014 P369-0027-2014	2015	Stage 1 - 2 Archaeological Assessment: 3019 Carp Road, Concession 3, Part Lot 11 Geographic Township of Huntley, City of Ottawa, Ontario	Paterson Group
P336-0034-2014	2014	Stage 1 Archaeological Assessment of Burnt Lands Provincial Park, Lots 14, 15, 16 & 17, Part Lots 19 & 20, Con 12, Geographic Township of Huntley, Carleton County, City of Ottawa & Lot 19 and Part Lots 20 & 21, Con 12, Geo Township of Ramsay, Town of Mississippi Mills, Lanark County, ON	Past Recovery Archaeological Services
P334-140-2011	2012	Stage 2 Archaeological Assessment (AA): West Carleton Environmental Centre within Parts of Lots 4 & 5, Con 3, Former Township of Huntley, Carleton County, City of Ottawa, ON	Archeoworks Inc.
P003-318-2011	2011	An Archaeological Assessment (Stage 1), Proposed Commercial Subdivisions, 3155 Carp Road (5R-8897), Parts 1, 2, & 3 RP, 5R-4255; Part 3, 4, & 5 RP 5R-11999' Parts 2-5, 11, 12), Part Lot 3, Con 12, Former Township of Huntley, City of Ottawa, On	Adams Heritage
P031-021-2011 P031-034-2011	2011	Stage 1, 2 and 3 Archaeological Assessments of the Proposed Badger Daylighting Services Carp Road Property, Part Lot 7, Con 2, Geographic Township of Huntley, City of Ottawa, ON	Past Recovery Archaeological Services
P003-282-2010	2010	Stage 1 AA, Karson Holdings, Part Lot 18, Con 3, Village of Carp, Geographic Township of Huntley, City of Ottawa	Adams Heritage
P003-209-2008	2008	Stage 1 & 2 Archaeological Assessment "Honeywell Estates" Subdivision Part Lot 18, Concession 2, Village of Carp. Geographic Township of Huntley, City of Ottawa	Adams Heritage
P039-069	2006	Stage 1-2 AA of Salisbury Street Subd. In Carp, Part of Lot 17, Con 2, Huntley Twp., City of Ottawa	Kinickinick Heritage Consultants
P039-01	2004	A Stage 1 & 2 Archaeological Assessment of a Proposed Residential Subdivision on Part Lots 7 & 8, Conc. 3, Huntley Township (Geo), City of Ottawa	Kinickinick Heritage Consultants

PIF#	Date	Title	Consultant
2002-046-017	2002	Stage 1 & 2 A.A. of a Proposed Subdiv. on Part of Lot 18, Con. 2, Huntley Twp. (Geo.), City of Ottawa	Kinickinick Heritage Consultants
2000-019-010, 2000-019-001	2000	A Stage 2 A.A. of a Proposed Aggregate Pit on the East Half of Lot 12, Con. 4, West Carleton (Huntley) Twp., RMOC	Kinickinick Heritage Consultants

1.4.4 Known Archaeological Sites

The primary source of information regarding known archaeological sites in the vicinity of the study area was the MTCS' archaeological site database. 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 study area under review is located within the vicinity of Borden Block BhFx.

The database was consulted on June 6, 2018 for the assessment and it was determined that there were no registered archaeological sites within a 1 km range of the current study area.

2.0 ANALYSIS AND CONCLUSIONS

2.1.1 Archaeological Potential

There are a number of physical, cultural and site-specific criteria employed in the assessment of archaeological site potential. 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:
  - Early historical dwellings, schools, churches, cemeteries, commercial buildings, industrial sites; and,
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a study area, the 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.

2.1.2 Potential for Pre and Post-Contact Indigenous Resources

Potential for pre-contact Indigenous archaeological sites is established by determining the likelihood that archaeological resources may be present on a subject property. Archaeological potential criteria commonly used by the MTCS 2011 were applied to determine areas of archaeological potential within the study area. These variables include: distance to various types of water sources, drainage, glacial geomorphology, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and 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.

In archaeological potential modelling, a distance to water criterion of 300 m is generally employed for water sources, including lakeshores, rivers, creeks, and swamps. The closest water source is a shallow seasonal wetland located in the northern portion of the study area therefore there is archaeological potential within 300 m of this wetland (Map 6).

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. The physiographic region is the Smith Falls Limestone Plain physiographic region which consists of a level plain with generally shallow soils over limestone bedrock belonging to the Ottawa Formation. Some relief is provided by low ledges and shallow valleys in the rock with more faulting and clay deposits associated with the portion of the plain north of Carleton Place (Chapman & Putnam 1984: 196-197). The soils consisted of Farmington Loam which is thin soils over limestone bedrock, with large areas of bare rock. Farmington Loam has moderate to excessive drainage and is best suited for periodical pasture or forestry use (Hoffman, Miller & Wicklund 1967: 25).

The MTCS also views the presence of previously registered archaeological resources as a prime indicator of archaeological potential. There are currently no registered Indigenous archaeological sites within 1 km of the study area.

2.1.3 Potential for Historic Euro-Canadian Resources

The criteria used by the MTCS to determine potential for historic archaeological sites include the presence of: 1) particular, resource-specific features that would have attracted past subsistence or extractive uses; 2) areas of initial, non-Indigenous settlement; 3) early historic transportation routes; and 4) properties designated under the Ontario Heritage Act (Government of Ontario 2011).

The documentary evidence including the historic maps and census records, do not indicate any settlement, structures or activity within the study area during the post-contact period. The 1863 Walling map does not list an owner for Lot 15, Concession 11 in Huntley Township. The 1879 Belden map lists C. Mahoney Sr. as the owner of the western half of Lot 15 but land registry records show the study property was not granted by the Crown until around 1886 to Bridget Mahoney. No archaeological sites are registered within 300 m of the study area.

An attribute identifying archaeological potential within the study area was the proximity of a historic transportation route (present day March Road), therefore there is archaeological potential within 100 m of March Road in the study area (Map 6).

3.0 RECOMMENDATIONS

Based on the archaeological potential for historic material cultural resources identified within the study area, this investigation has provided the basis for the following recommendations (Map 7):

1) All undisturbed land in the study property, approximately 29 acres (11.8 hectares), should be archaeologically investigated with hand excavated test pits in five metre intervals to the depth of at least 5 centimetres into natural *in situ* subsoil.

2) No further archaeological investigation is required within the remaining disturbed land in the study area approximately 19 acres (7.7 hectares), as depicted on (Map 7) and as a consequence that the Ministry of Tourism, Culture, and Sport issue a letter concurring that no additional archaeological investigations are required for this area.

This report is submitted to the Ministry 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. 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the archaeological field work and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

The MTCS is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the 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 0.18.* The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ontario 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 archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of *the Ontario Heritage* Act.

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

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

Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following standard statement: “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”.

5.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder Associates Ltd. (Golder) 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 Golder by Thomas Cavanagh Construction Limited (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 Golder'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, Golder 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 Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, 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 Golder. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder'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 Ontario Ministry of Tourism, Culture and Sports' *Standards and Guidelines for Consultant Archaeologists (2011).*

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7.0 IMAGES

Image 1: View of wooded area in northern section facing north

Image 2: View of wooded area in northern section facing northeast.

Image 3: View of seasonal wetland facing north.

Image 4: View of seasonal wetland facing southeast.

Image 5: Disturbed area showing gravel roadway and large berms facing southwest.

Image 6: Exposed bedrock in central portion of study area facing southwest.

Image 7: Exposed bedrock and disturbance in central portion of study area facing west.

Image 8: Disturbed area in central portion of study area facing northeast.

Image 9: Disturbed area showing gravel roadway and large berms facing west.

Image 10: Disturbed area showing gravel roadways and large rock piles facing northwest.

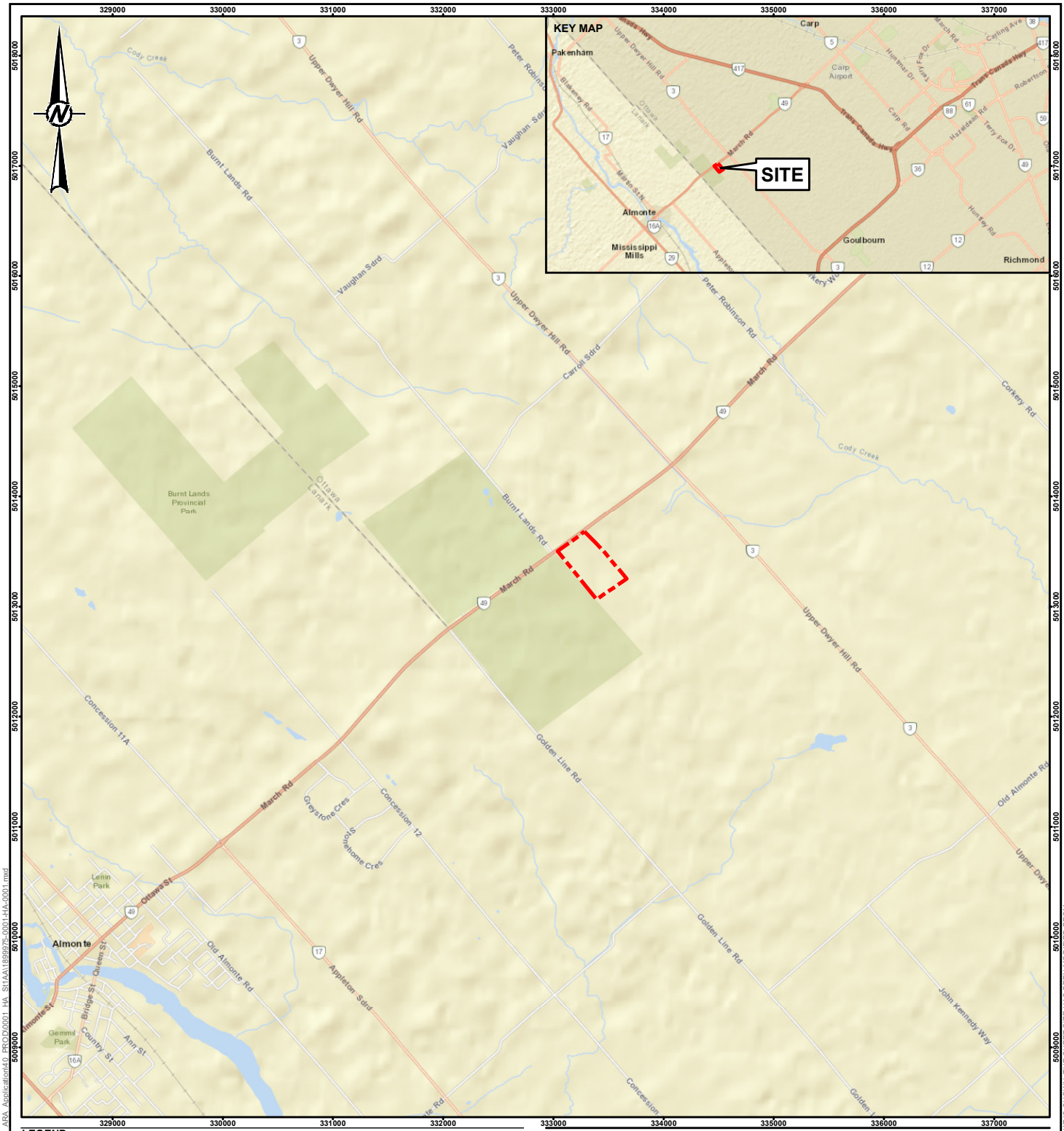
Image 11: Disturbance from gravel roadway, large rock piles and berm construction facing northeast.

Image 12: Disturbed area showing gravel roadways and large rock piles facing northwest.

Image 13: Cleared area in woodlot in southern portion of study area facing southeast.

Image 14: Woodlot in southeast portion of study area facing west.

8.0 MAPS



LEGEND

STUDY AREA

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1:50,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

THOMAS CAVANAGH CONSTRUCTION LIMITED

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
ALMONTE QUARRY EXPANSION

TITLE

KEY PLAN

CONSULTANT

GOLDER

YYYY-MM-DD	2018-11-21
DESIGNED	----
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REVIEWED	LD
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
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KEY MAP

SCALE 1:145,000

LEGEND

- STUDY AREA
- ROADWAY
- TRAIL
- TOPOGRAPHIC CONTOUR, metres
- LOT AND CONCESSION

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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SITE PLAN

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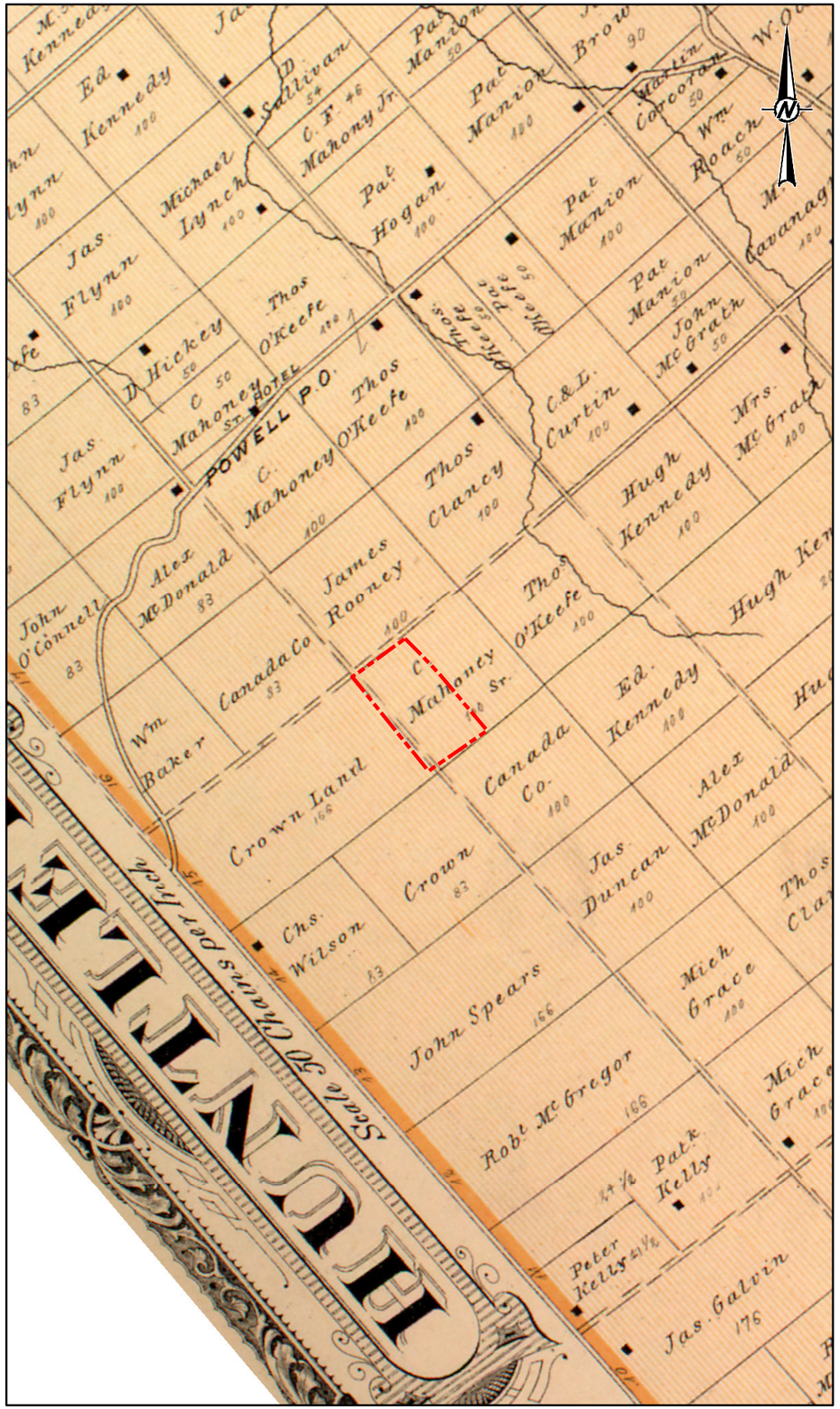

KEY MAP

SCALE 1:145,000

LEGEND

STUDY AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. MAP OF THE COUNTY OF CARLETON, CANADA WEST : FROM SURVEYS UNDER THE DIRECTION OF H.F. WALLING, 1863.
2. HUNTLEY TOWNSHIP, NORTH BOWER VILLAGE, MANOTICK, NEW EDINBURGH VILLAGE, MECHANICSVILLE, CARLETON COUNTY 1879.
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COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

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HISTORIC MAPS - PART LOT 15 (WEST), CONCESSION 11, HUNTLEY TOWNSHIP

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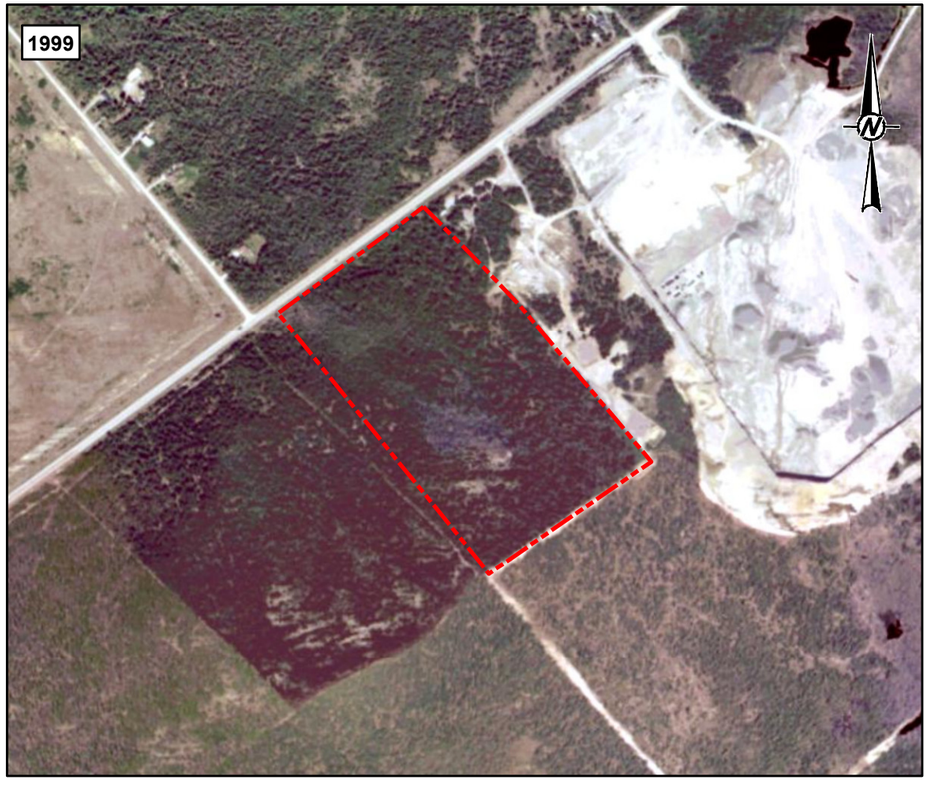

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STUDY AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

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2. 1976, 1991 AND 1999 AIR PHOTO, CITY OF OTTAWA, GEOOTTAWA.
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ALMONTE QUARRY EXPANSION

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HUNTLEY
LOT 16
CON 11

MARCH ROAD

HUNTLEY

HUNTLEY
LOT 15
CON 11

HUNTLEY
LOT 15
CON 12

HUNTLEY
LOT 14
CON 11

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KEY MAP

SCALE 1:145,000

LEGEND

- PHOTO LOCATION AND DIRECTION
- STUDY AREA
- ROADWAY
- TRAIL
- TOPOGRAPHIC CONTOUR, metres
- LOT AND CONCESSION

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT
ALMONTE QUARRY EXPANSION

TITLE
PHOTO LOCATIONS AND ORIENTATION

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GOLDER

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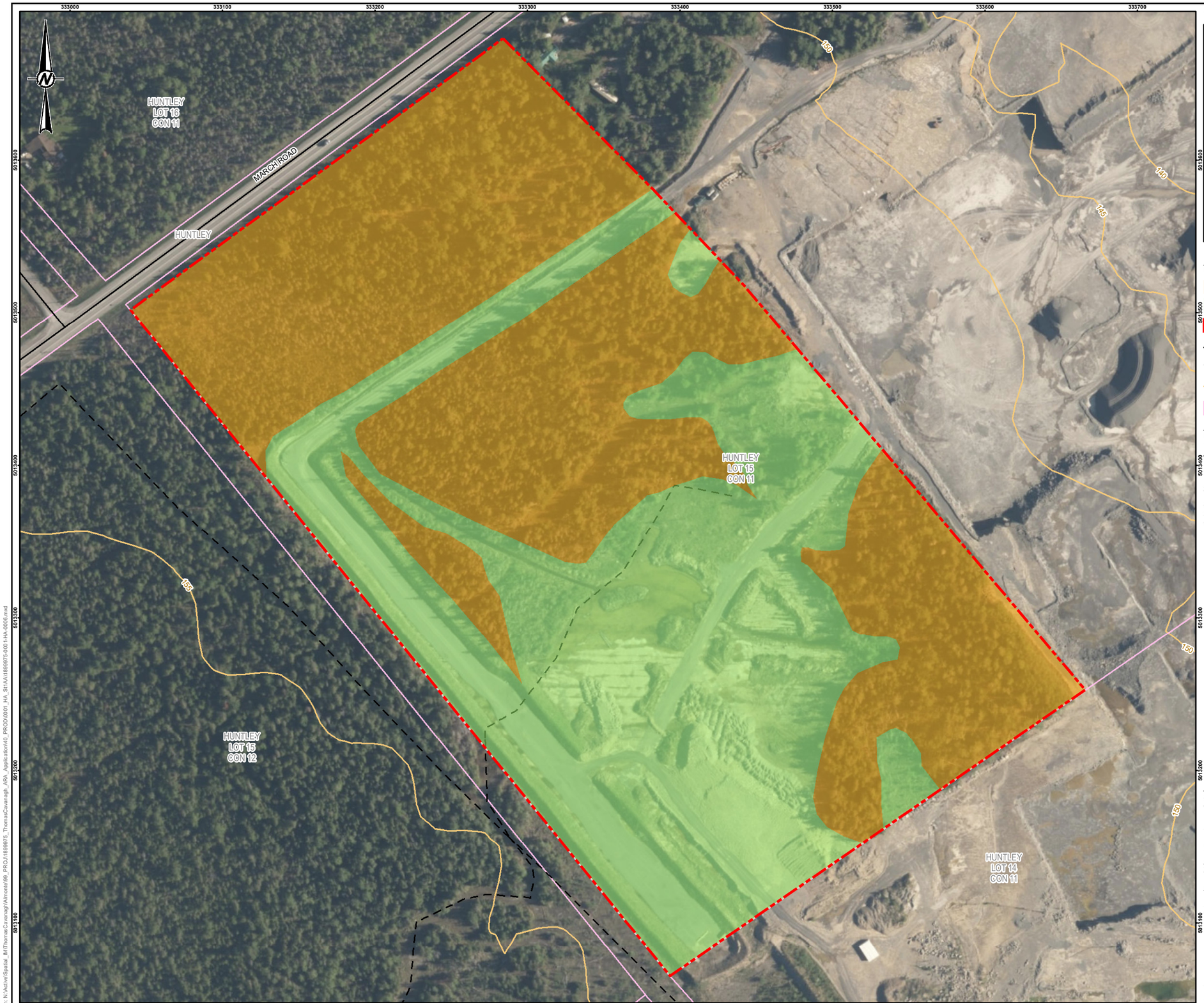

KEY MAP

SCALE 1:145,000

LEGEND

- ARCH POTENTIAL
- NO ARCH POTENTIAL
- STUDY AREA
- ROADWAY
- TRAIL
- TOPOGRAPHIC CONTOUR, metres
- LOT AND CONCESSION

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

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0 25 50 100
1:2,500 METRES

CLIENT
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PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
ALMONTE QUARRY EXPANSION

TITLE
ARCHAEOLOGICAL POTENTIAL

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KEY MAP

SCALE 1:145,000

LEGEND

- RECOMMENDED TO BE ARCHAEOLOGICALLY TESTED BY HAND EXCAVATED TEST PITS AT 5 METRE INTERVALS
- NO ADDITIONAL INVESTIGATION
- STUDY
- ROADWAY
- TRAIL
- TOPOGRAPHIC CONTOUR, metres
- LOT AND CONCESSION

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 25 50 100
1:2,500 METRES

CLIENT
THOMAS CAVANAGH CONSTRUCTION LIMITED

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
ALMONTE QUARRY EXPANSION

TITLE
STAGE 1 RECOMMENDATIONS

CONSULTANT
GOLDER

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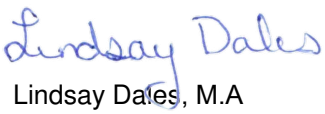
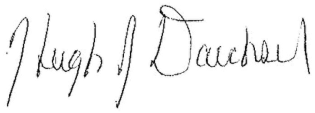
Signature Page

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.

Golder Associates Ltd.



Lindsay Dales, M.A
Staff Archaeologist



Hugh Daechsel, M.A
Principal, Senior Archaeologist

LD/HJD/ca

https://golderassociates.sharepoint.com/sites/25725g/deliverables/archaeology/p328-021-2018_21nov2018_re.docx

golder.com

Hugh Daechsel

Principal, Senior Archeologist (2007 to 2019)

Education

MA Anthropology (Archaeology), McMaster University, Hamilton, Ontario, 1981

BSc Anthropology and Geography (Honours), Trent University, Peterborough, Ontario, 1978

Certifications

Registered Professional Archaeology Licence

Employment History

Golder Associates Ltd. – Kingston, Ontario
Principal and Senior Archaeologist (2007 to 2019)

Senior archaeologist responsible for the coordination, technical review and quality assurance of archaeological projects within the Ontario Region. Specialist in the archaeology of eastern Ontario. Technically, has been involved in numerous impact assessment inventories including both terrestrial and underwater archaeology, mitigation of archaeological resources, cultural heritage studies and interaction with development proponents and regulatory agencies.

Heritage Quest – Kingston, Ontario
President and Senior Archaeologist (1993 to 2007)

Cataraqui Archaeological Research Foundation – Kingston, Ontario
Executive Director/Staff Archaeologist (1987 to 1992)

McMaster University – Hamilton, Ontario
Instructor/Doctoral Research/Teaching Assistant and Laboratory Supervisor (1978 to 1986)

McMaster University – Hamilton, Ontario
Doctoral Research (1982 to 1986)

McMaster University – Hamilton, Ontario
Teaching Assistant and Laboratory Supervisor (1978 to 1984)

SELECTED RELEVANT PROJECT EXPERIENCE

Stages 1 to 4 Archaeological Investigations on Parliament Hill
Ottawa, Ontario

Served as a Project Director, Project Manager, and Project Archaeologist on various investigations on Parliament Hill. These have included the Queen Elizabeth statue site, the CBUS Building site, the New Federal Courthouse site, and the Old Supreme Courthouse site. The investigations have resulted in the identification and recovery of pre-contact archaeological resources as well as evidence at the Barrack's Hill (1826-1857) military occupation at the site as well as documentation of various features relating to the development of the Parliament Building and landscape.

Stages 1 to 4 Archaeological Investigations at the Riverside South Development Area
Ottawa, Ontario

Served as a Project Director and Project Manager for a series of Stage 1, 2, 3, and 4 investigations of a 200 ha development in Ottawa South. The investigations included assessment of three mid to late nineteenth century Euro-Canadian sites and one Middle Archaic Period site.

Stages 2 to 4 Archaeological Investigations at the Royal Military College
Kingston, Ontario

Served as Project Director, Project Manager, and Project Archaeologist on a series of archaeological assessments, excavations, and monitoring at Point Frederick, Royal Military College. The archaeological resources identified and documented indicate pre-contact occupation through to the establishment of the Point as a Naval Dockyard in the late eighteenth century.

Stages 2 to 4 Archaeological Investigations of Various Locations and Sites on LeBreton Flats
Ottawa, Ontario

Served as Project Manger and archaeologist for a series of archaeological assessments and excavations on LeBreton Flats (2002-2006). These included the assessment for the National War Museum as well as excavations at the Aubrey Row Housing Site, the Occidental Hotel, and a series of mid to late nineteenth century residences.

Stage 1 and 2 Marine Archaeological Assessment West Toronto Shoreline
Toronto, Ontario

Served as Project Director and provided senior technical oversight for a Stage 1 and 2 archaeological assessment undertaken for the Toronto Region Conservation Authority of the west Toronto shoreline from Humber Bay to Marie Curtis Park in Mississauga.

Underwater Archaeological Assessment of Drag Lake Dam
Haliburton County

Served as project director and provided senior technical oversight for underwater archaeological assessment of the Drag Lake Dam site completed for Parks Canada.

Marine Archaeological Assessment of the North Bay Marina
North Bay, Ontario

Served as project director and provided senior technical oversight for marine archaeological assessment of potential areas of impact for the reconstruction of a breakwater in Lake Nipissing at North Bay.

Marine Archaeological Assessment of the Rideau Canal Segment at 5th Avenue, Ottawa Ottawa, Ontario	Served as project director and provided senior technical oversight for a marine archaeological assessment of the section of the Rideau Canal to be potentially impacted by construction of a pedestrian bridge.
Stage 1 through 3 Archaeological Assessments of Eastern Main Pipeline Eastern Ontario	Served as senior technical advisor on the Stage 1 through 3 archaeological assessment of the proposed twining of the TransCanada Eastern Main Pipeline from Iroquois to Markham in eastern Ontario.
Stages 2 through 4 Archaeological Assessments of the Summerhaven Windfarm Project Haldimand Co., Ontario	Served as senior technical advisor on the completion of the Stage 2 assessment and various Stages 3 and 4 archaeological assessments of sites impacted by construction of the Summerhaven Windfarm in Haldimand County for NEXTRA.
Stages 3 and 4 Archaeological Assessments of the Grand River Energy Project Haldimand Co., Ontario	Served as senior technical advisor for Stage 3 and 4 archaeological assessments of sites impacted by construction of the Grand River Energy Project windfarm in Haldimand County for Samsung.
Marine Archaeological Assessment of Hwy 401 Crossing of the Cataraqui River Kingston, Ontario	Served as project director and senior technical review for Marine archaeological assessment of the Hwy 401 expansion area over the Cataraqui River for MMM (WSP).
Stage 1 and 2 Archaeological Assessment of the Nation Rise Windfarm Project Stormont Co., Ontario	Served as project director and provided senior technical review for a Stage 1 and 2 archaeological assessment of proposed windfarm in North Stormont Co for EDP.
Stage 1 Archaeological and Marine Archaeological Assessment of the Norris Whitney Bridge Belleville, Ontario	Served as the project director and senior technical review for planned replacement of the Norris Whitney Bridge spanning the Bay of Quinte between Belleville and Prince Edward Co. for MMM (WSP).
Stages 1 to 4 Archaeological Assessments of Lansdowne Park Ottawa, Ontario	Served as the project director and senior technical review for revitalization of Lansdowne Park for the City of Ottawa.

PROFESSIONAL AFFILIATIONS

Ontario Archaeological Society

President, Association of Professional Archaeologists, 1988-1991

Associate Archaeologist, Cataraqui Archaeological Research Foundation, 1993

Director Ontario Archaeological Society, 1999-2000

Past President Cataraqui Clippers Soccer Club, 2015-present

Canadian Archaeological Association

Kingston

Archaeologist/Material Culture Analyst

Lindsay Dales, Archaeologist, is a licensed archaeological consultant (P328) specializing in Euro-Canadian archaeology and material culture analysis. She holds a Bachelor of Arts in Archaeology from Wilfrid Laurier University and a Master of Arts in Historical Archaeology of the Modern World 1500 to 1900 from Bristol University. She has been actively involved in archaeological investigations for 16 years including 13 years in Cultural Resource Management. She has worked with both public and private clients. These include projects for Defence Construction Canada, the City of Kingston, and Parks Canada, as well as a number of assessments for various engineering firms and developers in Eastern Ontario.

Lindsay has worked on a range of eighteenth to twentieth century domestic, military, and commercial sites. Some projects include the recording, excavation, research and report writing for various projects at the Royal Military College, Fort Frederick, Fort Henry, and projects in the City of Kingston. Lindsay has a strong background in laboratory protocol, material culture research, material culture analysis and collections management. She has catalogued and analyzed extensive collections from various sites in Kingston including the Fort Brant Dormitory, Birchall Pavilion and R72 Lift Station sites at RMC, Fort Frederick, West Branch Ditch project at Fort Henry, Market Square and the North Block (Leon's Centre) site, as well as cataloguing collections from Fort Wellington, Prescott and the Bell-Dickinson site, Bermuda. Previously, she has worked closely with material culture researchers and collections staff at the Parks Canada Ontario Service Centre in Cornwall and Ottawa. She is a member of the Council for Northeast Historical Archaeology and the Ontario Archaeological Society.

Education

Project Management Studies, Algonquin College, Ottawa, 2016

Master of Arts Historical Archaeology of the Modern World 1500 to 1900, Bristol University, United Kingdom, 2005

Honours Bachelor of Arts Archaeology, Wilfrid Laurier University, Waterloo, 2003

Certifications

Professional Archaeology License (P328) with the Ontario Ministry of Heritage, Sport, Tourism, and Culture Industries 2009

Government of Canada Security Clearance, Level II (Secret), 2012

Employment History

Golder Associates Ltd. – Kingston/Ottawa

Archaeologist/Material Culture Analyst (2017 to Present)

Execution of various project management duties, including proposal preparation, meeting objectives, scheduling, budgeting, field and laboratory duties related to a number of projects, including supervising both field and lab work and project management responsibilities. In addition, assists in the research, writing and production of reports. Assisted in the preparation of proposals and advised clients on the archaeological standards and guidelines in Ontario.

Ground Truth Archaeology – Kingston

Archaeologist (2017)

Participated in a stage 4 archaeological excavation of a complex urban site in Kingston which included pre-contact, French and early British occupation. Duties included field notes, profiles and plan views of excavated units.

US Embassy Havana – Havana, Cuba

GSO Assistant for Property, Supply and Warehouse (2013 to 2016)

Managed US Embassy's expendable and non-expendable supply systems, and the day-to-day operations of the material warehouses. Responsible for the

non-expendable property in 43 residences, chancery, and warehouse. Duties included tracking the daily requests/complaints regarding housing, property and supplies, scheduling inventories of residences and supplies as well as overseeing the receiving of purchase orders and reviewing receiving reports. Scheduled housing tours, organized Housing Board meetings and updated the federal leasing database. Developed and tracked annual purchasing plan for the furniture and appliance pool. Assisted with a major warehouse renovation project aimed to improve organization, removed discontinued items and increase health and safety measures.

Wilfrid Laurier University – Bermuda
Material Culture Analyst (2012)

Participated in several excavations of a Quaker homestead and cemetery dating from the mid-1700s to the early 1800s in Bermuda. Identified and catalogued artifacts from a small cemetery, kitchen area and midden as well as created a standardized classification method to inventory the artifacts in Excel.

Golder Associates Ltd. – Kingston/Ottawa
Archaeologist/Material Culture Analyst (2010 to 2012)

Execution of various field and laboratory duties related to a number of projects, including supervising both field and lab work and project management responsibilities. In addition, assists in the research, writing and production of reports. Assisted in the preparation of proposals and advised clients on the archaeological standards and guidelines in Ontario.

Cataraqui Archaeological Research Foundation – Kingston
Archaeologist/Collections Manager (2006 to 2010)

Execution of various field and laboratory duties related to a number of projects including supervising both field and lab work and collections management responsibilities. In addition, assisted in the research, writing and production of reports. Responsible for inventorying of artifacts and material culture analysis from multiple large-scale excavation projects in Kingston, including Fort Frontenac, Fort Fredrick, the Royal Military College, Leon's Centre, and Kingston City Hall/Market Square. Other tasks in the lab included the mending of ceramics, artifact photography, the digitization of field drawings, cataloguing of photos and supervising volunteers. Field duties included excavation and recording, specifically drawing of plan views and profiles.

Duties included the collections management for over 1000 boxes of artifacts. Other work included the improvements to standardize the classification in the material culture inventory database, creation of a material culture type collection and corresponding card catalogue. An overall assessment of the Foundation's artifact collection was also performed, in order to recognize any immediate threats, establish new procedures and determine the future significance of the collection. Responsible for the development of collections management policies and procedures, specifically donations/accession, research requests, emergency & disaster plan as well as assisting in developing a repository initiative.

Parks Canada – Cornwall
Material Culture Analyst/Collections Assistant (2007 to 2008)

Responsibilities included various tasks concerning the National Historic Site of Fort Wellington. Work included inventorying and cataloguing artifacts, as well

as the reorganization of the collection. Inventoried 10 boxes of ceramic material from pre-1980 excavation context as well as identified ceramics from the War of 1812 period from Fort Wellington. Re-inventoried several boxes of 1990 Fort Wellington latrine collection and completed cataloguing of tobacco smoking pipes from the Fort Wellington latrine.

Ground Truth Archaeology – Kingston
Material Culture Analyst (2007 to 2008)

Analysed and inventoried artifacts from two 19th century historic sites in Prescott and Perth. This period of work included breaks between projects.

Parks Canada – Cornwall
Assistant Archaeologist (2005 to 2006)

Performed archaeological field duties at the west branch ditch tower at Fort Henry National Historic Site. Duties included excavation, recording and drawing. Processed and inventoried the artifacts into Parks Canada's material culture database. Assisted in writing the post excavation report as well as researched and analyzed recovered material culture.

Archaeological Research Associates – Waterloo
Field Technician (2005)

Performed archaeological field duties at various sites in Southwestern Ontario. Tasks included field walking and test-pitting, as well stage 3 excavations.

Parks Canada – Kingston
Assistant Archaeologist (2005)

Performed archaeological field duties at Fort Henry National Historic Site related to structures from the first Fort Henry (1812-1846). Duties included excavation, recording and drawing.

Cataraqui Archaeological Research Foundation – Kingston
Field Technician (2003)

Performed Stage 2 and Stage 3 archaeological field investigation at the Royal Military College (RMC) related to the War of 1812 occupation of the Navy Dockyard as well as Stage 4 excavation for fire escapes at Fort Frontenac National Historic Site related to French (1673-1758) and British (1783-1867) period occupations. Duties included excavation, recording and drawing.

Archaeological Research Associates – Midland
Field Technician (2003)

Performed archaeological field duties at various sites in Southwestern Ontario. Tasks included field walking and test-pitting, as well as screening soils to recovered human remains from an ossuary.

Parks Canada – Cornwall
Assistant Archaeologist, Co-op Student (2001 to 2002)

Performed archaeological field duties at Fort Wellington National Historic Site, Fort George National Historic Site, Fort Mississauga National Historic Site, Fort Henry National Historic Site and Cathcart Tower. Duties included compiling field notes, reports, photos, maps and reference materials as well as

excavation, recording and drawing. Processed, inventoried and analysed recovered material culture.

Wilfrid Laurier University Field School – Penetanguishene
Field Technician (2000)

Performed archaeological field duties at the Royal Naval and Military Establishment in Penetanguishene. Excavated a midden feature dating from 1834 -1856 occupation. Duties included excavation, recording field notes, photos, drawing and processing material culture. Assisted with ground penetrating radar testing to locate cemetery.

PROJECT EXPERIENCE – ARCHAEOLOGY

R72 Lift Station, Royal Military College
Kingston, ON

Conducted a Stage 2 and Stage 4 archaeological assessment for Defence Construction Canada of areas to be affected by R72 Lift Station Upgrade at Royal Military College, Kingston. The investigation included the hand excavation of 11 units in order to determine the extent of the War of 1812, French and Middle Woodland period deposits. The area was recorded through drawings and photography. Over 11,000 historic artifacts were catalogued and analysed. A report was produced.
Role: Lead Archaeologist, Material Culture Analyst, Report Author

Homestead Apartment
Kingston, ON

Full scale Stage 4 excavation of a parking lot containing late 18th and early 19th century British structures as well as Indigenous, and French occupation layers. This site was recorded through drawings and photography, as well as GPS co-ordinates.
Role: Field Archaeologist

Bell-Dickinson House
Bermuda

A research excavation of the Bell-Dickinson residence (17th-19th century). Excavations uncovered the associated lime kilns, midden and cemetery. The area was recorded through drawings and photography. Artifacts were collected, catalogued and analysed.
Role: Material Culture Analyst, Field Archaeologist

Ottawa LRT Project
Ottawa, ON

Full scale Stage 4 excavation of the 19th century West End Hotel, Western Methodist Church, and residential buildings on Albert Street, downtown Ottawa. Both hand and mechanical excavation techniques. The sites were recorded through drawings and photography, as well as GPS co-ordinates. Sorting, Processing, analysing
Role: Field Archaeologist, Laboratory Technician

Bridge Realignment
Hearst, ON

Conducted Stage 1 & 2 Archaeological Assessments for the re-alignment of several bridges in the Hearst area. The assessment included an analysis of land registry records, historic maps and shovel test pit investigation.
Role: Project Manager, Lead Archaeologist, Report Author

Eagleson Landfill Site
Cobourg, ON

Conducted Stage 1 & 2 Archaeological Assessments for Northumberland County. The assessment included an analysis of land registry records, historic maps and shovel test pit investigation.
Role: Project Manager, Lead Archaeologist, Report Author

Barriefield Hill Site, Royal Military College
Kingston, ON

Conducted a Stage 2 and Stage 3 archaeological assessment for Defence Construction Canada of areas to be affected by Sports Dome at Royal Military College, Kingston. The investigation included the hand excavation of 1 x 1 m units in order to determine the extent of historic deposits. The area was recorded through drawings and photography. Historic artifacts were catalogued and analysed. A report was produced.
Role: Project Manager, Lead Archaeologist, Material Culture Analyst, Report Author

Birchall Pavilion, Royal Military College
Kingston, ON

Stage 2 to 4 excavation of the Birchall Pavilion archaeological site, due to the site's significance in Canada's early military history as the Royal Navy Dockyards. Over 20,000 artifacts were collected and analysed. A report was produced.
Role: Field Archaeologist, Material Culture Analyst

Market Square, City Hall Kingston, ON	Full scale Stage 4 excavation of the site of downtown Kingston's revitalized Market Square. The Market building was the central hub of early Kingston and was destroyed by fire and the associated demolition in the mid-19th century. Over 200,000 artifacts were collected and analysed. Role: Material Culture Analyst
Leon's Centre (Arena) Kingston, ON	Stage 2 to 4 excavation in preparation for the construction of downtown Kingston's Leon Centre (Arena), due to the site's proximity to Fort Frontenac and early railway yard. Over 200,000 artifacts were collected and analysed. Role: Field Archaeologist, Material Culture Analyst
Fort Brant Dormitory, Royal Military College Kingston, ON	Full scale excavation of the site of the Fort Brant Dormitory building, due to the site's significance in Canada's early military history as the Royal Navy Dockyards. Over 300,000 artifacts were collected and analysed. A report was produced. Role: Material Culture Analyst, Report Author
West Ditch Tower, Fort Henry National Historic Site Kingston, ON	Conducted an archaeological investigation of the west branch ditch tower, due to restoration plans at Fort Henry National Historic Site. Over 5,000 artifacts were collected and analysed. A report was produced. Role: Field Archaeologist, Material Culture Analyst, Report Author
Hydro One Corridor Caledonia, ON	Conducted a Stage 2 and Stage 3 archaeological assessments of a hydro corridor. The investigation included field walking, shovel test pitting and hand excavation of 1 x 1 m units. Role: Field Archaeologist
Fire Escape Installation, Fort Frontenac Kingston, ON	Full scale excavation of the site for the installation of fire escape within Fort Frontenac, due to the site's significance to early French settlement, fur trade, and the Loyalist settlement. The investigation included the hand excavation of 2 x 2 m units in order to determine the extent of historic deposits. The area was recorded through drawings and photography. Role: Field Archaeologist
Palisade Investigation, Fort George National Historic Site Niagara-on-the-Lake, ON	Conducted archaeological investigation for the replacement of the palisades at Fort George National Historic site. The assessment included both hand and mechanical excavation in order to determine the extent of historic deposits and assess the potential impact of construction activities on these resources. The area was recorded through field notes, drawings and photography. Role: Assistant Archaeologist, Laboratory Technician
Restoration Project, Cathcart Tower National Historic Site Kingston, ON	Conducted archaeological investigation for the restoration of Cathcart Tower. The investigation included 1 x 2 m units in order to determine the extent of historic deposits and assess the potential impact of construction activities on these resources. The area was recorded through field notes, drawings and photography. Role: Assistant Archaeologist, Laboratory Technician
Discovery Harbour Archaeological Site Penetanguishene, ON	A research excavation of the Military and Naval Establishment at Discovery Harbour (19th century). Excavations uncovered the associated military foundations and a midden feature dating from 1834 -1856 military occupation. The area was recorded through field notes, drawings and photography. Artifacts were collected, catalogued and analysed. Assisted with ground penetrating radar testing to locate cemetery. Role: Field Archaeologist, Laboratory Technician

PROFESSIONAL AFFILIATIONS

Council for Northeast Historical Archaeology

Ontario Archaeological Society