



ABOUT US

Most land developments, regardless of scale, require a heritage assessment before earth moving can begin. Do you have a property with a heritage condition? Need an archaeological assessment done? Here's what Archaeological Consultants & Contractors can offer:

- Over 18 years experience conducting Stage 1-4 Archaeological Assessments and Excavations all across Ontario - from small-scale residential parcels to large-scale infrastructure and renewable energy projects (including many Municipal, OMNR and MTO projects)
- Experience in delineating unmarked cemeteries and burial relocation using remote sensing
- Experience in working in heavily urbanized areas using traditional, mechanical and non-intrusive methods
- Experience in GIS (Master Plan) Modeling and Cartography
- Specialization in the chemical & instrumental analysis of archaeological artifacts
- First Nations Cultural Consultation
- Underwater Archaeological Assessments

Why are we different from the rest? Our ties to the local academic community give Archaeological Consultants & Contractors unmatched, exclusive access to specialized expertise, equipment, instrumentation and personnel. This in turn allows Archaeological Consultants & Contractors to *provide complete and comprehensive consulting services at a very competitive price.*

The dedicated team of professionals at Archaeological Consultants & Contractors are experts at the rapid documentation and removal (if necessary) of all types of archaeological deposits. We strive to uniquely balance the timeline and budgetary constraints of our clients with the legislative archaeological and clearance requirements demanded by the Ministry of Tourism & Culture. *With our utmost dedication to your projects, large or small, all of your archaeological assessment and excavation requirements will be met.*

SERVICES

What we do best - Stage 1 to 4 Archaeological Assessments...

Archaeological assessments are often required in advance of residential / commercial development or service projects (i.e. road widenings, utility corridors, and waste management facilities) in order to meet provincial and municipal legislation. Archaeological Consultants & Contractors is qualified to engage in historic and archival document searches and undertake intensive field surveys and excavations to in order to satisfy Ministry of Culture requirements and guidelines.

Archaeological assessments are carried out through a stepwise process, starting with a background literature & archival search (a.k.a. Stage 1 archaeological assessment). This is typically combined with an intensive field survey (the Stage 2 archaeological assessment) as the early detection of a significant archaeological site through a detailed field assessment allows for the modification of a project's draft plan and timeline with a minimum of delay and expense. Most projects will start with a combined Stage 1 & 2 assessment.

The following is a brief summary of what each stage (if applicable to your property) will entail:

Stage 1 - The Archival Search (Paperwork...)

During the archival and historic records research of a subject property, archaeological potential is assessed through the identification of any known historic or pre-contact archaeological sites that have been registered on the subject property and through the identification of structures present on historic maps. This data offers an idea of what may be expected in terms of potential heritage concerns.

Stage 2 – The Initial Field Assessment (Walking...)

A Stage 2 archaeological assessment comprises the field review of the subject property. An experienced archaeological field crew assesses the subject property under the guidance of a licensed field supervisor. On farmland, this assessment is typically carried out by means of a 5m pedestrian survey of the subject property. In standing woodlots, the property may be assessed through shovel test-pitting, a process in which small pits (30 cm in diameter by approximately 30 cm in depth) are excavated and the material is screened through 6mm mesh. In heavily urbanized or developed areas, ACC utilizes remote sensing (i.e. GPR, resistivity survey, magnetometer survey) and test trenching in order to determine the likelihood of archaeological deposits on the property.

In underwater assessments, these techniques are carefully applied to submerged shorelines. In deeper locales, remote sensing (i.e. towed side-scan sonar's and magnetometers) are utilized.

If artifacts are encountered, they are catalogued and analyzed to determine their cultural and temporal affiliation, as well as their archaeological and/or their historical significance. If the deposit is deemed significant according to provincial legislation, Stage 3 work will be required.

Stage 3 – Test Unit Excavations (The Little Dig...)

The goal of stage 3 work is twofold: to define the limits of the archaeological deposit, and to determine if the deposit is substantial enough to tell us something about the people that created it.

The first step is a controlled surface collection, in order to record the location of each artifact found on the surface. Following this, a map is generated to reveal the artifact trending, density and distribution across the site. A grid and the surface scatter map is then employed to guide the placement and excavation of a series of one meter square test units across the site. Each unit is hand excavated to sterile subsoil and the soil contents screened through six-millimeter wire mesh in order to maximize the recovery of artifacts. The test units and grid are referenced to a site datum, and the location of each unit is recorded.

If artifacts are encountered, they are catalogued and analyzed to determine their cultural and temporal affiliation, as well as their archaeological and/or their historical significance. If the deposit is deemed significant (i.e. is it big enough? old enough?), Stage 4 work may be required if the site cannot be avoided or preserved.

Stage 4 – Salvage Excavation (The Big Dig...)

A Stage 4 requirement demands the total excavation of an archaeological deposit. Stage 4 recommendations are ideally avoided through the creation of a protected green-space, which surrounds and protects the archaeological deposit for future generations. However, in many cases, the avoidance of an archaeological deposit is not feasible and the site must be excavated and removed prior to development. When this occurs, Archaeological Consultants & Contractors is qualified and capable of conducting the excavation of any archaeologically significant deposits that can potentially occur within a subject property using responsible and cost-effective techniques.

Archaeological Master Plans

Many municipalities, in conjunction with a long-term development planning strategy, utilize predictive modeling of archaeological resources. An Archaeological Master Plan generated by Archaeological Consultants & Contractors begins with the compilation of registered and unregistered archaeological sites within the region and the preparation of an overview of the area's settlement history. ACC then uses this material for the development of an archaeological site potential model based on known site locations, past and present land uses, environmental and cultural-historical data and a review of the current Provincial planning and management guidelines for archaeological resources. Archaeological Consultants & Contractors can provide a recommended management strategy for known and potential archaeological resources within their jurisdiction.

Construction Monitoring Services

In urban areas, development may affect archaeological resources sealed under later layers altered by land use development activities. The removal of soil or fill during construction must be monitored to detect and document archaeological resources when:

- Archaeological assessment has confirmed the presence of deeply buried or sealed archaeological resources.
- Archaeological assessment has concluded that it is likely that previously unassessed archaeological resources are present.
- Construction must avoid protected archaeological site areas.

ACC can conduct on-site construction monitoring whenever construction work is proceeding in areas where archaeological resources are confirmed or where construction is extending to a depth of concern. As well, ACC, in consultation with the proponent and contractors, can prepare a contingency plan outlining procedures, documentation and time requirements in the event that archaeological resources are found.

It should be noted that on-site monitoring techniques rely considerably on the field expertise and experience of the personnel involved, not only to recognize areas of high archaeological potential, but also to determine the appropriate significance of any archaeological resources encountered. ACC recognizes that work-stoppages represent significant costs to the proponent; this extreme measure will only be utilized when absolutely necessary. In most cases, ACC can work around and with construction activities while maintaining appropriate standards.

Delineation of Unmarked Cemeteries

Identifying the limits of unmarked cemeteries has become a priority for many clients in recent years. Boundary demarcation and burial location for 19th and early 20th century cemeteries is often unreliable. With the use of non-invasive remote sensing and traditional large-scale trenching, Archaeological Consultants & Contractors can provide reliable boundary information as well as approximate numbers of interments present at a site. In cases where remote sensing is an unsuitable method, Archaeological Consultants & Contractors can provide monitoring services to ensure that interments are identified during site modification while remaining undisturbed.

Scientific Analysis of Archaeological Artifacts

As specialists in the scientific analysis of archaeological artifacts for many years, Archaeological Consultants & Contractors offers accessible, professional scientific and analytical services and advice to field archaeologists who may be surveying, recording, or excavating archaeological sites that produce ceramic, lithic, glass or metal objects. Whether the material is newly excavated or already held in museum, research, commercial, or private collections, Archaeological Consultants & Contractors offers an expert and comprehensive finds-study service, including trace element analysis, metallographic, mineralogical and chemical analysis.

On-site evaluations can be arranged. Alternatively, you are welcome to send us details of your material and we will advise you on the most appropriate analytical methods.

Underwater Archaeological Assessments

Ontario's submerged cultural resources are non-renewable and valuable. The archaeological and historical value of marine sites offer information and understanding of the past and interpretative opportunities for museums not provided by sites located on land because of the incredible preservation that can take place underwater.

Archaeological Consultants & Contractors specializes and has experience in the practice of marine archaeology in Ontario. ACC staff are qualified to conduct underwater surveys and accurately record and inventory artifacts and wrecks prior to development impact. Often site avoidance is the preferred alternative, as the value of underwater sites and wrecks (with their associated artifacts) is maintained. However, exceptions may be made if artifacts must be removed because they are endangered, or for research and interpretative purposes.

STAFF

Archaeological Consultants & Contractors' Principal Archaeologist, George R. Clark, has over 18 years of experience practicing consulting archaeology in Ontario. After earning a Bachelor of Science (Honors) degree in Chemistry from the University of Waterloo, George completed a Master of Arts degree in Anthropology from the University of Manitoba. George concurrently holds a position of Professor at the Seneca College of Applied Arts & Technology's School of Biological Sciences and Applied Chemistry, where he teaches analytical instrumental methods to chemical and pharmaceutical technologists in addition to his consulting practice. His affiliation with Seneca College allows for unmatched, exclusive access to specialized expertise, equipment, instrumentation and personnel.



George has directed hundreds of archaeological assessments all over Ontario, ranging from small stage 1 and 2 parcel assessments to large stage 4 historic and pre-contact excavations. George has also participated in and directed international excavations in Scotland and in Greece. George's research interests include the study of archaeological materials through the regular application of instrumental chemical analytical techniques, including Liquid and Gas Chromatography (GC-MS/FID/TCD & HPLC), UV/Vis & IR Spectrophotometry, Flame/Furnace Absorption Spectrophotometry and Inductively-Coupled Plasma OES.



George is also a PADI certified Master Scuba Diver and has participated in several near-shore surveys and underwater assessments in Ontario.

George is a Professional Member of the Association of Professional Archaeologists of Ontario and is a Registered Professional Archaeologist.

Ministry of Tourism, Culture and Sport

Archaeology Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tél.: (519) 675-6898
Email: Shari.Prowse@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes d'archéologie
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Tél. : (519) 675-6898
Email: Shari.Prowse@ontario.ca



Dec 11, 2015

George Clark (P120)
Archaeological Consultants and Contractors
14 Thorncliffe Toronto ON M4K 1V5

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "A Stage 1 and 2 Archaeological Resource Assessment of Part of Lot 32, Concession 4 EHS, Mono Township, County of Dufferin, Ontario. ", Dated Nov 30, 2015, Filed with MTCS Toronto Office on Dec 10, 2015, MTCS Project Information Form Number P120-144-2012, MTCS File Number 0003587

Dear Mr. Clark:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the Stage 1-2 assessment of the study area as depicted in Figure 8 of the above titled report and recommends the following:

Should it not prove possible to avoid this site (i.e. removal of the site area from the development application lands) and protect this site from disturbance (i.e. the creation of a no impact buffer (silt-fence) placed 20m from the boundaries of the site as defined in the Stage 2 assessment and a the creation of a 50m monitoring zone, the provision of a detailed avoidance strategy, written confirmation from the proponent regarding the proponent's commitment to implementing the strategy and confirmation that ground alteration (e.g. servicing, landscaping) will avoid archaeological sites with outstanding concerns and their protective buffer areas, the submission of a construction monitoring schedule and a written confirmation from the proponent that a licenced consultant archaeologist will monitor construction in areas within the 50m monitoring zone, and that the consultant archaeologist is empowered to stop construction if there is a concern for impact to an archaeological site), then depending on the placement of the site and its 20 meter protective buffer, this site should be subject to a full or partial Stage 3 archaeological assessment in accordance with the 2011 Standards and Guidelines for Consultant Archaeologists to further investigate and precisely refine the site's character and extent.

Should a Stage 3 archaeological assessment be required, all units should be carefully excavated in accordance with the 2011 Standards and Guidelines for Consulting Archaeologists, which states that the appropriate fieldwork strategy to be followed in sections 3.2.1 and 3.2.2.

Specifically, the Stage 3 assessment should begin with the establishment of a site datum at the center of the site followed by a controlled surface pick-up (CSP) in accordance with section 3.2.1 of the 2011 Standards and Guidelines for Consulting Archaeologists. The extant area of the site should be re-ploughed and allowed to weather prior to the CSP. The locations of all collected surface artifacts should be mapped and all relevant information recorded.

Subsequent to this, a test unit excavation in accordance with section 3.2.2 of the 2011 Standards and Guidelines for Consulting Archaeologists should take place. The test units should be hand-excavated 5cm into sterile subsoil and all soil fills should be screened through six-millimeter wire mesh to facilitate artifact recovery. The subsoil should be trowelled, and all profiles were examined for undisturbed cultural deposits.

The test unit location strategy that should be followed is that suggested for post-contact sites where it is not yet evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 as per Table 3.1 in section 3.2.3 of the 2011 Standards and Guidelines for Consulting Archaeologists. This involved the excavation of 1 m square test units in a 5 m grid across the site and the excavation of additional test units, amounting to at least 20% of the grid unit total, focusing on areas of interest within the site extent (e.g. distinct areas of higher concentrations within a broader artifact concentration or adjacent to high- yield units).

A detailed photographic record of on-site investigations must be maintained, and a report documenting the methods and results of laboratory analysis, together with an artifact inventory, all necessary cartographic and photographic documentation must be produced and submitted to the MTCS in accordance with the licensing requirements as detailed in the 2011 Standards and Guidelines for Consulting Archaeologists.

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 the archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Shari Prowse
Archaeology Review Officer

cc. Archaeology Licensing Officer
Sam Greenwood, Greenwood Construction Co. Ltd.
NA NA, Ministry of Natural Resources, Guelph District

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

Ministry of Tourism, Culture and Sport

Archaeology Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tél.: (416) 314-7143
Email: Katherine.Cappella@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes d'archéologie
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Tél. : (416) 314-7143
Email: Katherine.Cappella@ontario.ca



Apr 8, 2016

George Clark (P120)
Archaeological Consultants and Contractors
14 Thorncliffe Toronto ON M4K 1V5

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "A Stage 1 and 2 Archaeological Resource Assessment of the Proposed Violet Hill Pit, Lot 31 & Part of Lot 30, Concession 4 (East of Hurontario Street), Mono Township, County of Dufferin, Ontario.", Dated Jan 14, 2015, Filed with MTCS Toronto Office on Feb 19, 2015, MTCS Project Information Form Number P120-0183-2014

Dear Mr. Clark:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the Stage 1 and 2 archaeological assessment of the subject property as depicted in Figures 1, 2 and 3 of the above titled report and recommends the following:

The entire study area should be considered free from further archaeological concern. No further archaeological assessment of the property is required.

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 the archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no

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Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Katherine Cappella
Archaeology Review Officer

cc. Archaeology Licensing Officer
Sam Greenwood, Greenwood Construction Co. Ltd.
Sarah deBortoli, ministry of Natural Resources, Guelph District

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