

Unit 1E - Stage 3: Site-specific Assessment

Overview of Process

<p>Historic documentation</p> <ul style="list-style-type: none"> • For sites where historic documentation is available, detailed documentary research of the land use and occupation history specific to the archaeological site. • Supplements Stage 1 or 2 background study. 	
<p>Archaeological site assessment</p> <ul style="list-style-type: none"> • Archaeological fieldwork to gather data from each archaeological site identified in Stage 2 with cultural heritage value or interest. • Assessment methods depend on field conditions, techniques used in the Stage 2 property survey and type of archaeological site: 	
<p>Controlled surface pick-up (CSP)</p>	<ul style="list-style-type: none"> • An examination of the archaeological site's ground surface, recording the locations of and collecting surface artifacts. • For open ploughed fields where archaeological sites were discovered through Stage 2 pedestrian survey.
<p>Test unit excavation</p>	<ul style="list-style-type: none"> • Controlled excavation of one-metre squares in selected locations to: <ul style="list-style-type: none"> o Determine the presence of buried artifacts, structures, stratigraphy and cultural features o Collect a representative sample of material. • Must be done as follow-up to controlled surface pick-up and for archaeological sites discovered through Stage 2 test pit excavation.
<p>Analysis: assessing the level of cultural heritage value or interest</p> <p>Analysis of the data and artifacts to determine the archaeological site's level of cultural heritage value or interest, based on its:</p> <ul style="list-style-type: none"> • Information potential • Interest to the community • Potential value as a community resource. 	
Assessed cultural heritage value or interest	Recommended next step
Cultural heritage value or interest of archaeological site has been sufficiently documented	Fieldwork completed – no further fieldwork or mitigation of development impacts required
Archaeological site has high level of cultural heritage value requiring protection or complete documentation	Stage 4 – Mitigation of development impacts through protection or excavation

Stage 3: Site-specific Assessment

All archaeological sites give us information about the past and reflect the human history of Ontario, but some have greater cultural heritage value or interest than others. This stage assesses the cultural heritage value or interest of each archaeological site identified in Stage 2, to determine whether it has been sufficiently documented or further measures are required to protect or document the site fully.

Objectives

- To document the extent, artifacts and cultural affiliations of an archaeological site identified in Stage 2 as requiring further assessment
- To gather a representative sample of artifacts from the archaeological site
- To assess the archaeological site's cultural heritage value or interest
- To recommend appropriate strategies for future conservation (protection and avoidance or excavation where protection is not possible).

Historic Documentation

For sites where historic documentation is available, detailed documentary research of the land use and occupation history specific to the archaeological site is required. This supplements the background research on the property done in previous stages.

Standards

1. Research the following information sources when available and relevant to the archaeological site:
 - Historic settlement maps
 - Land titles or records, land registry documents
 - Historical land use and ownership records (e.g. assessment rolls, census records, commercial directories)
 - Individuals with oral or written information about the archaeological site (e.g. proponent, professional and avocational archaeologists, local residents, Aboriginal peoples)
 - Primary historic documentary sources (e.g. diaries, manuscripts)
 - Secondary historic documentary sources (e.g. local and regional histories, academic research)

- Features or information identifying an archaeological site as a site sacred to Aboriginal peoples.

Archaeological Site Assessment

Archaeological fieldwork to gather data from each archaeological site identified in Stage 2 with cultural heritage value or interest. The required assessment method, either controlled surface pick-up or test unit excavation, depends on field conditions, techniques used in the Stage 2 property survey and type of archaeological site. The assessment may include one or both methods.

Standards

1. Before conducting fieldwork, review all relevant reports of previous fieldwork on the archaeological site or property.
2. Conduct the archaeological site assessment when weather and lighting conditions permit good visibility of land features. Do not conduct the archaeological site assessment when weather and lighting conditions reduce the chance of finding evidence of archaeological resources (e.g. snow cover, frozen ground, conditions of excessive rain or drought, heavy fog).
3. Using the Global Positioning System (GPS) according to the requirements set out in *Standards and Guidelines for Archaeological Fieldwork: Using the Global Positioning System (GPS)*, record the locations of:
 - a central fixed point within the archaeological site
 - a permanent datum that can be directly tied to a development map.
4. Photo-document all field conditions (e.g. ploughed field, pasture or woodlot, disturbances).
5. If fieldwork uncovers human remains, cease fieldwork and report the discovery to the appropriate authorities. See *The Discovery of Human Remains – Best Practices* for details.

Controlled Surface Pick-Up (CSP)

An examination of the archaeological site's ground surface, recording the locations of and collecting surface artifacts. This method is for open ploughed fields where archaeological sites were discovered through pedestrian survey. The goal of CSP is to gather enough of an artifact sample to document the extent of the archaeological site on the surface.

Standards

1. If ground surface visibility has decreased between Stage 2 and conducting the Stage 3 controlled surface pick-up, ensure that the site area is re-cultivated and weathered following the standards set out for Pedestrian Survey in *Standards and Guidelines for Archaeological Fieldwork: Stage 2*.
2. Map the location of all artifacts on the ground surface using a total station, transit and tape or stadia rod. Record and catalogue artifacts by their mapped location. Tie in this map to the site GPS readings by recording a central point in the scatter.
3. For very large and dense surface scatters, conduct full CSP by grid units (maximum size 5 x 5 metres) over the archaeological site. Record and catalogue artifacts within their grid unit designation.
4. Decisions regarding the type and number of artifacts to collect must ensure a balance between gathering enough material to document the archaeological site and leaving enough in place to locate the site if required (e.g. to conduct further assessment, define a protected area or conduct excavation):
 - Collect all formal artifact types and diagnostic categories, including all refined ceramic sherds on nineteenth century archaeological sites
 - Collect a representative sample of undiagnostic artifacts, taking into consideration the archaeological site type, type and frequency of undiagnostic artifacts and likelihood of further field work being required.

Test Unit Excavation

Controlled excavation of one-metre squares in selected locations to determine the presence of buried artifacts, structures, stratigraphy and cultural features, and collect a representative sample of material. This method must be used as a follow-up to controlled surface pick-up and for archaeological sites discovered through Stage 2 test pit excavation.

The goal of test unit excavation is to conduct adequate documentation of artifacts and cultural features in both the core (centre of surface scatter density or cluster of positive test pits/high yields) and the periphery of the site to determine:

- The complete extent of the archaeological site
- The archaeological site's cultural affiliation and time period
- The archaeological site's cultural heritage value or interest

- Whether Stage 4 work is required and the extent of Stage 4 work needed.

Standards

1. Establish a grid across the site based on the datum to determine placement of test units. Grids must be mapped using transit and tape measurements. Unmeasured estimated unit locations are not acceptable.
2. Excavate by hand one square metre test units by systematic levels (stratigraphic or standardized) into the first five centimetres of subsoil, unless the excavation uncovers a cultural feature.
3. Do not use heavy machinery (e.g. gas powered augers, backhoes) except to remove sterile or recent fill covering confirmed deeply buried or sealed archaeological sites (e.g. in urban areas, floodplains).
4. If test unit excavation uncovers a cultural feature, do not excavate into feature fill. Instead:
 - record the exposed plan of the feature and
 - place thin plastic sheet over the unit floor and back fill the unit.
5. Screen soil through mesh no greater than six millimetres, except:
 - for potential Paleo-Indian or Early Archaic sites, screen soil from 10% of test units through mesh no greater than three millimetres.
6. Collect all artifacts and record and catalogue with their grid unit designation.

Guidelines

1. Based on the consultant's professional judgement, when the site type indicates that artifacts smaller than six millimetres (e.g. very small lithic flakes, seed beads) may be present and should be recovered, some or all soil may be screened through three-millimetre mesh or water screened.

Determining the Location and Number of Test Units

While the location and number of test units required will vary from site to site, depending on the type of site, standards for the most common types of archaeological site are outlined in the chart, *Standards for Determining the Location and Number of Test Units*.

The aim of the test unit strategy is to provide uniform data across the site, and focused testing of key areas (e.g. site core, site periphery, areas of lower artifact concentration, isolated concentrations of diagnostics or classes of artifacts), as determined appropriate based on professional judgement.

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Unit 1E – Stage 3
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Standards for Determining the Location and Number of Test Units

Site Type	Objectives	Test unit strategy
Small pre-contact and post-contact sites where level of cultural heritage value or interest still needs to be determined	<ul style="list-style-type: none"> • Determine site extent • Determine cultural affiliation • Determine level of cultural heritage value or interest. 	<ul style="list-style-type: none"> • Locate 1x1 metre units in a five-metre grid across the site. • Locate an additional 20% of the grid unit total (e.g. if grid total is 40 units, an additional eight units) focused in areas of interest (such as distinct areas of higher artifact concentrations within a broader artifact concentration or adjacent to high yield units) within the site extent.
Small pre-contact and post-contact sites where level of cultural heritage value or interest is evident in Stages 1 or 2	<ul style="list-style-type: none"> • Determine site extent • Determine possible Stage 4 mitigation strategies • Gather a representative artifact sample from across the site. 	<ul style="list-style-type: none"> • Locate 1x1 metre units in a 10-metre grid across the site. • Locate an additional 40% of the grid unit total (e.g. if grid total is 40 units, an additional 16 units) focused in areas of interest (such as distinct areas of higher artifact concentrations within a broader artifact concentration or adjacent to high yield units) within the site extent.
Plough-disturbed large multi- or single-component lithic scatters	<ul style="list-style-type: none"> • Determine areas of site with high levels of cultural heritage value or interest • Determine Possible Stage 4 mitigation strategies • Gather a representative artifact sample from across the site. 	<ul style="list-style-type: none"> • Locate multiple grids placed over areas of artifact concentration (e.g. greater surface densities of artifacts, concentrations of diagnostics, apparent single component concentrations, defined activity areas) and excavate 1 x 1 metre units across those grids at five-metre intervals. • Locate an additional 20% of the grid unit total (e.g. if grid total is 40 units, an additional eight units) between these areas to document areas of lower concentration. • Locate an additional 10% of the grid unit total (e.g. if grid total is 40 units, an additional four units) on the periphery of the surface scatter to determine site extent and sample site periphery.
Large multi- or single-component lithic scatters found solely through test-pit	<ul style="list-style-type: none"> • Determine possible Stage 4 mitigation strategies • Gather a representative 	<ul style="list-style-type: none"> • Locate 1x1 metre units in a 10-metre grid across the site. • Locate an additional 40% of the grid unit total (e.g. if grid total is 40 units, an additional 16 units) focused in areas of

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Site Type	Objectives	Test unit strategy
survey	artifact sample from across the site.	interest (such as small artifact concentrations or adjacent to high yield units) within the site extent.
Woodland village sites	Gather a representative artifact sample from <ul style="list-style-type: none"> • plough-disturbed middens • topsoil deposits across the site. 	<ul style="list-style-type: none"> • Locate multiple grids placed over all areas of artifact concentration indicating possible plough-disturbed middens and excavate 1 x 1 metre units across those grids at five-metre intervals. • Locate an equal number of units (e.g. if 40 units were located over middens, an additional 40 units) across the remainder of the site in either systematic grid or in focused areas to recover a sample of topsoil deposits • See site-specific guidelines for test unit strategies for further information on defining extent of this type of site.
Intact sites found in undisturbed woodlot	<ul style="list-style-type: none"> • Determine site extent • Determine nature of subsurface deposits • Gather a representative artifact sample from across the site. 	<ul style="list-style-type: none"> • Locate 1x1 metre units in a five-metre grid across the site. • Site extent is defined when at least three units in a row along each grid line yield five or fewer artifacts per unit.
Other site contexts e.g. nineteenth century villages, industrial complexes, stratified sites	<ul style="list-style-type: none"> • Determine site extent • Determine distinct areas of site requiring separate sampling • Determine possible Stage 4 mitigation strategies 	<ul style="list-style-type: none"> • Site-specific test unit or trenching strategy that balances systematic and focussed testing across the site.

Site-specific Guidelines: Large Sites

While the test unit strategies outlined in the chart are standard for most sites, professional judgement will also inform the on-site findings during the Stage 3 excavation.

For large sites, it may be possible to recover enough information to determine site characteristics and appropriate Stage 4 mitigation strategies before all test units within the standardised grids have been completed. In these cases:

1. Test unit excavations may be discontinued if all information required to fully inform Stage 3 recommendations has been collected, and the following minimum level of work has been completed:
 - At least 50% of the units that should be excavated based on the chart have been excavated
 - Grid units have been excavated around the entire site extent, confirming the limits for the site
 - At least 50% of the additional “infill” units have been excavated
 - All surface or test pit concentrations of material have had test units placed into them.
2. This is not an option for plough-disturbed large multi- or single-component lithic scatters where grid extent is already limited to areas of surface concentration.
3. Fieldwork may include collection of geophysical data to support site interpretations and recommendations for Stage 4 mitigation strategies.

Site-specific Guidelines: Large Woodland Villages

The test unit strategies outlined in the chart may not be sufficient to accurately define the full extent of large Woodland village archaeological sites, as they may not capture archaeological resources located beyond the village site (e.g. beyond the palisade).

To aid in defining the full extent of the archaeological site, mechanical topsoil removal may be used to excavate test trenches beyond the archaeological site limits established by surface artifact scatter and positive test units (see *Standards and Guidelines for Archaeological Fieldwork: Stage 4* for complete standards and guidelines for mechanical topsoil removal):

1. Mechanically remove topsoil in narrow (no more than five-metre) trenches placed at 20-30 metre intervals along that portion of the site perimeter not otherwise defined by physical constraints (e.g. steep slopes, edge of waterway, low, wet areas).

2. Excavate trenches from the outside in: begin each trench 10-20 metres beyond the limit of previously mapped surface artifact scatter or test unit artifact drop-offs and excavate towards the site limits as defined by surface scatter or positive test units.
3. Continue trenches into the site until they begin to uncover village settlement patterns (e.g. palisade walls, house walls).
4. Do not continue trenches more than 5-10 metres into the village once settlement patterns are uncovered.

Analysis: Determination of Archaeological Sites Requiring Stage 4 Mitigation of Development Impacts

The information collected in Stage 3 is used to assess the cultural heritage value or interest of the archaeological site. Archaeological sites with cultural heritage value or interest require Stage 4 mitigation of development impacts by avoidance and protection or excavation, if they have not been completely excavated and documented by the end of Stage 3.

For sites of cultural heritage value or interest, the archaeologist will need to review the viability of Stage 4 protection options with their client. It may also be necessary to engage with Aboriginal peoples to help inform the decision to preserve or excavate. This consultation typically creates a pause between Stage 3 and Stage 4 (see also *Standards and Guidelines for Archaeological Fieldwork: Stage 4*).

Archaeological sites with low or no cultural heritage value or interest are usually adequately identified, excavated and documented in Stages 1, 2 and 3.

The table *Cultural Heritage Value or Interest Criteria* outlines general criteria and indicators to be used when assessing the cultural heritage value of sites.

Archaeological Sites with Confirmed Cultural Heritage Value or Interest

In addition to the cultural heritage value or interest criteria outlined in the chart, these classes of archaeological site always have cultural heritage value or interest and automatically require Stage 4:

1. Paleo-Indian archaeological sites (shows the earliest human occupation of the province) regardless of size or artifact yield
2. Large, dense lithic scatters (very high yields of artifacts per unit)
3. Woodland period archaeological sites
4. Post-contact archaeological sites pre-dating 1830

5. Archaeological sites identified as sacred and burial sites. For these sites, the preferred recommendation is avoidance and protection. Burial sites are also subject to provisions of the *Cemeteries Act*
6. Late nineteenth and twentieth century archaeological sites where background documentation (from any stage) or archaeological features indicate cultural heritage value or interest.

Cultural Heritage Value or Interest Criteria

Information Value	
The archaeological site contributes to local, regional, provincial or national archaeological history.	
Criteria	Indicators
Cultural historic value	Information from the archaeological site advances our understanding of: <ul style="list-style-type: none"> • cultural history locally, regionally, provincially or nationally • past human social organization at the family, household or community level • past material culture manufacture, trade, use and disposal.
Historic value	The archaeological site is associated with: <ul style="list-style-type: none"> • oral histories of a community, Aboriginal community, or specific group or family • early exploration, settlement, land use, or other aspect of Ontario's history • the life or activities of a significant historic figure, group, organization, or institution • a significant historic event (cultural, economic, military, religious, social or political).
Scientific value	The archaeological site contains important evidence that contributes to: <ul style="list-style-type: none"> • paleo-environmental studies • testing of experimental archaeological techniques.
Rarity or frequency	The archaeological site: <ul style="list-style-type: none"> • is unique locally, regionally, provincially or nationally • is a good comparison to similar archaeological sites in other areas • is of a type that has not been studied or has rarely been studied and is under-represented in archaeological research.
Productivity	The archaeological site contains:

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	<ul style="list-style-type: none"> • large quantities of artifacts, especially diagnostic artifacts • exotic or rare artifacts depicting trade or other exchange patterns.
Integrity	<ul style="list-style-type: none"> • The archaeological site is well preserved and retains a large degree of original material.
<p>Value to a Community The archaeological site has intrinsic value to a particular community, Aboriginal community or group.</p>	
Criteria	Indicators
The archaeological site has traditional, social or religious importance to a particular community, First Nation or group.	<p>The archaeological site:</p> <ul style="list-style-type: none"> • is a known landmark • is associated with a traditional recurring event in the community, Aboriginal community or group (e.g. an annual celebration) • contains human remains • is identified as a sacred site.
<p>Value as a Public Resource The archaeological site contributes to enhancing the public's understanding and appreciation of Ontario's past.</p>	
Criteria	Indicators
The archaeological site has potential for public use for education, recreation or tourism.	<p>The archaeological site:</p> <ul style="list-style-type: none"> • is or can be accessible for tourists, local residents or school groups • is or can be incorporated into local education, recreation or tourism strategies and initiatives.

Site-specific Criteria: Small or Diffuse Lithic Scatters

Lithic scatters can range from small sites consisting of a few lithic flakes with or without diagnostic artifacts, to large dense scatters of lithic debris and formal tools, and from single-component Archaic sites to multi-component Archaic and Woodland sites. While large dense lithic scatters automatically have high cultural heritage value or interest and require Stage 4, the cultural heritage value or interest of small or diffuse lithic scatters is more difficult to evaluate.

Standards

1. The potential for cultural heritage value or interest is higher and Stage 4 is required for small or diffuse lithic scatters with at least one of these characteristics:
 - One or more test units yielding 10 or more artifacts
 - One or more test units yielding five to nine artifacts including at least one diagnostic artifact
 - One or more ceramic sherds
 - One or more sub-surface cultural features.

Guidelines

1. The potential for cultural heritage value or interest is lower and Stage 4 is not required but may be recommended based on professional judgement for small or diffuse lithic scatters that do not meet the above standards but do have at least one of these characteristics:
 - One or more exotic or rare artifacts indicating possible trade, spiritual/religious or ceremonial activity
 - Location of the archaeological site is associated with unique or unusual landscape features.
2. If the archaeological site only marginally meets these criteria (e.g. a complete test unit strategy has been done as outlined in the chart *Standards for Determining the Location and Number of Test Units* and only a few units have yielded 10 or more artifacts), the potential for cultural heritage value or interest is low. Either of these options may be followed based on professional judgement:
 - Continue to Stage 4 **or**
 - Conduct further test unit excavation to confirm the low counts and completely document the archaeological site (i.e. Stage 4 not required).

**Site-specific Criteria: Domestic Archaeological Sites Post-dating
1830**

This refers to nineteenth century house and homestead archaeological sites, both Aboriginal and immigrant, where background documentation (from any stage) or archaeological features do not clearly indicate cultural heritage value or interest. The potential for cultural heritage value or interest of this type of archaeological site is more difficult to determine.

Use the cultural heritage value or interest criteria in the chart to evaluate other nineteenth century archaeological sites (commercial, industrial, institutional, religious and military).

Standards

1. Sites with at least one of the following characteristics have greater potential for cultural heritage value or interest and require Stage 4:
 - In southern Ontario: most (80%) of the archaeological site's period of occupation pre-dates 1870.
 - Throughout Ontario (especially northern Ontario): the archaeological site is associated with the first generation of settlement of a pioneer or particular cultural group, even if it post-dates 1870.

Related Units:

- *Standards and Guidelines for Archaeological Fieldwork: Using the Global Positioning System (GPS).*
- *The Discovery of Human Remains – Best Practices*
- *Standards and Guidelines for Archaeological Fieldwork: Stage 2*
- *Standards and Guidelines for Archaeological Fieldwork: Stage 4*
- *Project Reports and Maps: Stage 3*