Ontario

19th Century Rural Historical Farmstead Sites
Standards for Consultant Archaeologists

2021

Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)

Contents

1. Introduction

For the purposes of these standards, “Rural Historical Farmstead Sites” are defined by the Ministry of Heritage, Sport, Tourism and Culture Industries as 19th century archaeological sites dating between 1830 and 1900, associated with household level farming by people of European descent, and found in areas that have not been subject to modern development (e.g., farm fields, fallow fields and woodlots).

1.1 Purpose

The standards set out the minimum fieldwork and reporting requirements for the archaeological assessment of RHF sites in Ontario. They are intended to support consultant archaeologists in:

- Evaluating an RHF site’s cultural heritage value or interest (CHVI).
- Deciding whether an RHF site requires further assessment or mitigation of development impacts.
- Developing assessment and mitigation strategies.

All RHF sites have some degree of CHVI. However, they are also a common type of archaeological site in many parts of Ontario. The purpose of these standards is to help consultant archaeologists identify an RHF site’s degree of CHVI earlier in the archaeological assessment process.

These standards include more information gathering and analysis as part of Stage 2 and 3 assessments, compared to the 2011 *Standards and Guidelines for Consultant Archaeologists* (2011 Standards and Guidelines). This is intended to help streamline the assessment process, preventing unnecessary Stage 4 excavation of RHF sites with low levels of CHVI, while ensuring the conservation of RHF sites with higher levels of CHVI.

The standards in this document are identified using the short form “RHF” so that they may be distinguished from the standards in the 2011 Standards and Guidelines (e.g. “RHF Standards” and “RHF Section 2.1, Standard 1”). Frequently referenced technical standards from the 2011 Standards and Guidelines have also been hyperlinked to an appendix.

Important terms throughout the document are hyperlinked to the Glossary (see page 18).

1.2 Application of the Standards

As a term and condition of holding an archaeological licence in Ontario, licensees must comply with any standards issued by the ministry for carrying out archaeological fieldwork, for reporting on archaeological fieldwork and for analyzing archaeological collections (see *Terms and Conditions for Archaeological Licences*).

1.2.1 Stage 1 assessments

For Stage 1 assessments, consultant archaeologists must follow Section 1 of the 2011 Standards and Guidelines. Unless otherwise required by the RHF standards below, consultant archaeologists must follow Section 7 of the 2011 Standards and Guidelines for archaeological reporting.

1.2.2 Stages 2, 3 and 4

The RHF standards apply to Stages 2 and 3 assessment and Stage 4 mitigation of development impacts for 19th century sites meeting both of the following criteria:

- 20 or more 19th century artifacts in areas that have not been subject to modern development (e.g., farm fields, fallow fields or woodlots)
- RHF sites determined through background research to be affiliated only with Euro-Canadian occupants

The 2011 Standards and Guidelines must be followed for any of the following types of 19th century sites:

- sites that are known or found to be deeply buried
- sites that are known or found to be part of larger archaeological contexts (e.g., a village or industrial complex)
- multi-component sites
- farmstead sites that date to before 1830
- sites known, or found during background research to be occupied by Indigenous peoples, other populations that are not well represented by the archaeology of the 19th century, or individuals of cultural or historical importance

Information

If you have questions or require advice on implementing the standards, email archaeology@ontario.ca.

When requesting advice, please provide as much information as possible, including:

- the Project Information Form (PIF) number associated with your project
- status of work and findings to date
- an up-to-date map of the most recent fieldwork results
- descriptions, photographs or images of fieldwork and fieldwork conditions
- information about artifacts collected, including types of artifacts, size of collection and artifact dating (if relevant)

2. Stage 2: Property Assessment

The RHF standards for Stage 2 property assessment largely follow Section 2 of the 2011 Standards and Guidelines. However, the RHF standards for Stage 2 must be followed when property assessment results in the identification of RHF sites meeting the criteria set out in Section 1.2.2. The standards will help determine whether the RHF site has a high level of CHVI and will require Stage 3 assessment.

2.1 Fieldwork

2.1.1 Pedestrian Survey

RHF Standards

1. If 20 or more 19th century artifacts are identified during pedestrian survey, complete the pedestrian survey and carry out a controlled surface pick-up (CSP) following the 2011 Standards and Guidelines, Section 3.2.1, Standards 1 to 3.

2.1.2 Test Pit Survey

RHF Standards

1. If 19th century artifacts are identified during a test pit survey, complete the test pit grid following the 2011 Standards and Guidelines, Section 2.1.3, Standard 1.

2.1.3 Test Pit Survey - when archaeological resources are found

RHF Standards

1. If it is not evident from test pit survey results that the RHF site will require further assessment, excavate 1m^2 test units within 5m of the positive test pits, following the 2011 Standards and Guidelines, Section 3.2.2 and the reporting standards of Section 7.9 and Option B of Section 2.1.3, Standard 2.
2. The number and placement of test units around positive test pits must:
    a. obtain enough artifacts to support the determination of the site's level of CHVI.
    b. demonstrate and document site stratigraphy and integrity.
    c. identify and document artifact distribution patterns (e.g. time period, site or activity area function).
3. Follow the 2011 Standards and Guidelines, Section 3.2.2, Standard 5 and excavate the first 5cm of natural subsoil across the unit unless excavation uncovers a cultural feature.
4. Examine test units for stratigraphy, evidence of modern fill and cultural features.
5. If a feature is found during test unit excavation, follow RHF Section 3.2.2, Standard 8.

6. Apart from the sampled classes of artifacts described in RHF Section 5, collect and keep all artifacts. The ministry may confirm a proposed alternative strategy for artifact collection. To propose an alternative strategy request advice by emailing archaeology@ontario.ca.
7. Upon completion of a test unit with no cultural features, excavate a test pit ("sondage") in a corner of the unit to confirm that the identified subsoil horizon does not represent a fill layer under which cultural or natural topsoil layers exist:
    a. The sondage must be at least 30cm wide and 30cm deep.
    b. Screen soil through mesh no greater than 6mm to recover artifacts.
    c. If the sondage demonstrates further buried cultural or natural topsoil layers, excavation must continue across the unit into the first 5cm of natural subsoil or until a cultural feature is uncovered.
    d. If the sondage demonstrates deeply buried cultural layers, the RHF standards may no longer apply. The licensee is to follow the 2011 Standards and Guidelines and request advice from the ministry.
8. Once excavation and documentation of a unit is complete, place geotextile fabric over any features and backfill the unit.

2.2 Historical Documentation

RHF Standards

1. Research all historical documentation sources listed in the 2011 Standards and Guidelines, Section 3 as well as any additional relevant sources.
2. Incorporate available historical and municipal information for any existing heritage structures or architectural remains ("built heritage") that may be related to the archaeological site.

2.3 Determining the Requirement for Stage 3 Assessment

RHF Standards

1. Follow the 2011 Standards and Guidelines, Section 2.2, Standard 1 for determining the requirement for Stage 3 assessment where, based on the results of Stage 2 assessment, it is evident that the site:
    a. dates predominantly before 1830.
    b. was occupied by members of an Indigenous community or other underrepresented group.
    c. was occupied by individuals of cultural or historical importance.

2. Archaeological sites meeting the following criteria require Stage 3 assessment following RHF standards:

   a. The site is located in Southern Ontario and analysis of historical documentation and artifacts has determined that 80% or more the site's occupation dates to before 1900.

   b. The site is associated with the first generation of European settlers in the area regardless of location and whether settlement was after 1870.

   c. The site includes indicators of CHVI as listed in the 2011 Standards and Guidelines, Table 3.2.

3. Stage 3: Site Specific Assessment

The objective of these standards is to better evaluate and document the CHVI of an RHF site during Stage 3 assessment in order to make more informed decisions as to whether Stage 4 mitigation of development impacts is required. RHF sites that would have required Stage 4 work under the 2011 Standards and Guidelines may be sufficiently assessed and documented by the end of Stage 3 assessment through the application of these standards.

3.1 Historical Documentation

RHF Standards

1. If detailed historical research as required in RHF Section 2.2 has not yet been carried out (e.g., the Stage 2 assessment was completed before the publication of these RHF standards), follow RHF Section 2.2 and document the results in the Stage 3 report.

3.2 Fieldwork

3.2.2 Controlled Surface Pick-up (CSP)

RHF Standards

1. If the site is located in an area that has been previously ploughed and a controlled surface pick-up (CSP) has not been carried out, follow the 2011 Standards and Guidelines, Section 3.2.1.
2. If ground surface visibility has decreased in the time between the Stage 2 survey and the Stage 3 CSP, ensure that the site area is re-cultivated and weathered following the standards set out for pedestrian survey in the 2011 Standards and Guidelines, Section 2.1.1.
3. If a CSP has already been completed, begin test unit excavation following RHF Section 3.2.2 below and the 2011 Standards and Guidelines, Section 3.2.2.

3.2.2 Test Unit Excavation

RHF Standards

1. Following the 2011 Standards and Guidelines, Table 3.1, Standards 3-4, begin test unit excavation by excavating the 1m^2 test units in a 10m grid across the site.
2. Place and excavate additional test units amounting to a minimum of 40% of the grid unit total (e.g., if the grid has 20 units, an additional 8 units), focussing on areas of

interest within the site extent (such as distinct areas of higher concentrations within a broader artifact concentration or adjacent to higher yield units).

3. Follow the 2011 Standards and Guidelines, Section 3.2.2, Standard 5 and excavate the first 5cm of natural subsoil across the unit unless excavation uncovers a cultural feature.
4. Examine test units for stratigraphy, evidence of modern fill and cultural features.
5. Apart from the sampled classes of artifacts described in RHF Section 5, collect and keep all artifacts. The ministry may confirm a proposed alternative strategy for artifact collection. To propose an alternative strategy request advice by emailing archaeology@ontario.ca.
6. The total number and placement of test units must:
    a. Provide a uniform level of data collection across the site (e.g. artifacts, stratigraphic information).
    b. Investigate artifact distribution patterns or areas of stratigraphic interest (e.g., buried cultural deposits or natural topsoil layers).
    c. Gather a representative sample of artifacts from across the site.
    d. Determine the extent of the archaeological site (see Section 3.2, RHF Standard 11 below).
    e. Inform and support recommendations.
7. If a larger test unit is needed to expose potential features or stratigraphy that would inform the determination of the site's CHVI, group 1m^2 units into trenches or larger areas and:
    a. record artifact finds by individual 1m^2 units
    b. excavate only one stratigraphic layer or systematic level of soil across a unit at a time to avoid digging through features
8. To support the determination of the site's CHVI, features found during test unit excavation may be partially excavated to confirm that they are cultural, to determine function and time period and to obtain an artifact sample:
    a. Excavate enough of the feature to determine its nature. Follow standards for cultural feature excavation and documentation in the 2011 Standards and Guidelines, Section 4.2.2.
    b. If the nature of a feature cannot be determined or a large enough artifact sample gained through the excavation of the portion of the feature visible in the test unit, the unit may be extended by 1m^2 increments.
    c. Following partial feature excavation, place geotextile fabric over the test unit floor and the excavated portion of the feature before backfilling the unit.

10. Upon completion of a test unit with no cultural features, excavate a test pit ("sondage") in a corner of the unit to confirm that the identified subsoil horizon does not represent a fill layer under which cultural or natural topsoil layers exist:
    a. The sondage must be at least 30cm wide and 30 cm deep.
    b. Screen soil through mesh no greater than 6mm to recover artifacts.
    c. If the sondage demonstrates further buried cultural or natural topsoil layers, excavation must continue across the unit into the first 5cm of natural subsoil or until a cultural feature is uncovered.
    d. If the sondage demonstrates deeply buried cultural layers, the RHF standards may no longer apply. Follow the 2011 Standards and Guidelines and request advice from the ministry.
11. Establish the limits of the area of the archaeological site through:
    a. Excavation of repetitive low artifact yields (e.g., less than 10% of highest yielding unit) and/or sterile test units (yielding no artifacts or cultural features) on the periphery of the site.
    b. Permanent physical constraints of a natural form (e.g., river edge, cliff edge) or cultural form (e.g. building).
    c. Comparison with typical characteristics of RHF sites within the same region as documented through historical research.
12. Once excavation and documentation of a unit is complete, place geotextile fabric over any features and backfill the unit.

3.4 Determining Whether Mitigation of Development Impacts is Required

The information collected in Stage 3 is used to assess the CHVI of the archaeological site and determine whether Stage 4 mitigation of development impacts is required. It is also used as the basis for formulating Stage 4 strategies, if required. Following the standards above will help provide enough information to determine if the site has been sufficiently assessed and documented at the completion of Stage 3 in accordance with its level of CHVI and there will be no need for further mitigation of development impacts.

RHF Standards

1. Follow the 2011 Standards and Guidelines, Table 3.2, Section 3.4 and Section 3.4.2 to determine the site's degree of CHVI and whether mitigation of development impacts is required.
2. Where Stage 3 assessment has identified that the RHF site meets one or more of the following criteria, Stage 4 mitigation of development impacts is required:

a. The site was occupied entirely or partly by Indigenous peoples or other populations that are not well represented in the archaeology of the 19th century as identified by historical research.
b. The site is associated entirely or partly with individuals and/or events of local, provincial or national significance.
c. 80% of the site's occupation dates to before 1870, as determined by historical research and archaeological data (See RHF Section 5).
d. The site is associated with the area's first generation of European settlement.

3. For all other RHF sites, do not recommend Stage 4 mitigation of development impacts unless it can be clearly demonstrated that the site meets a high degree of CHVI.

4. Stage 4: Mitigation of Development Impacts

There are two options for mitigating development impacts to an archaeological site: Avoidance and protection or excavation. To carry out avoidance and protection follow the 2011 Standards and Guidelines, Section 4.1.

Alternative excavation and/or artifact sampling strategies may be appropriate for large sites. To propose an alternative or sampling strategy, email a request for advice to archaeology@ontario.ca.

Standards

1. Follow the 2011 Standards and Guidelines, Sections 4.2.2, 4.2.3 and 4.2.7 for RHF sites that meet any of the following criteria:
    a. Predominantly date to before 1830
    b. Are associated with the area's first generation of European settlement
    c. Were occupied entirely or partly by Indigenous peoples or other populations that are not well represented in the archaeology of the 19th century as identified by historical research
    d. Are part of a multi-component site
2. Apart from the exceptions listed below, excavate RHF sites dating to after 1830 using mechanical topsoil removal following the 2011 Standards and Guidelines, Section 4.2.3, Standards 2-6 and Section 4.2.7, Standards 3-5.
3. Only hand excavate ploughzone and surface layers on sites dating predominantly to after 1830 if one or more of the following apply:
    a. The archaeological site represents the first generation of settlement for an area.
    b. Stage 3 assessment has revealed shallow cultural deposits or stratigraphy that would be damaged by mechanical topsoil removal.
    c. Samples from middens or artifact scatters have not provided:
        i. the date range of a midden.
        ii. an understanding of the site's cultural affiliation.
        iii. an understanding of the socio-economic status of the site's occupants.
4. If excavation uncovers cultural features follow the 2011 Standards and Guidelines, Section 4.2.2, Standard 7 and Section 4.2.7, Standard 3-5.
5. If buried topsoil layers are found during mechanical topsoil removal:
    a. Mechanically uncover the remainder of the buried topsoil surface.
    b. Following the 2011 Standards and Guidelines, Section 2.1.2, Standards 5 -8, test pit the buried topsoil surface at 2m to 5m intervals depending on the size of

the exposed buried topsoil surface, until a sufficient artifact sample has been gathered to determine the date range of the buried topsoil.

c. Once a large enough artifact sample has been gathered, continue mechanical topsoil removal to subsoil following 2011 Standards and Guidelines, Section 4.2.3.

6. Apart from the sampled classes of artifacts described in RHF Section 5, collect and keep all artifacts. The ministry may confirm a proposed alternative strategy for artifact collection. To propose an alternative strategy request advice by emailing archaeology@ontario.ca.

5. Artifact Documentation and Analysis

Stage 2, 3 and 4 archaeological assessment reports must include documentation and analysis of artifacts and other archaeological materials found.

The intent of documentation and analysis in the land use planning and development context is to provide the following:

- a record of artifacts and other archaeological materials recovered from an archaeological site
- a basis for recommendations either that there are no further concerns for impacts to that archaeological site or that further work will be required to mitigate impacts
- enough basic information to help future researchers determine whether the site is relevant to their studies

In addition to the standards in the 2011 Standards and Guidelines, Section 6 and Tables 6.2 and 6.3, follow the standards for artifact documentation and analysis below to support assessment conclusions and recommendations.

Catalogues

Cataloguing the entire artifact assemblage by stratigraphic layer and functional classifications (with detailed breakdowns of artifact characteristics) provides statistically reliable data to support conclusions related to the age and functional areas of the site. It can also identify the socio-economic status and cultural affiliation of the site's occupants. These findings will inform the evaluation of a site's CHVI and whether further assessment or mitigation of development impacts is required.

Alternative sampling and discard strategies

Depending on the size and nature of the site or artifact collection, alternative strategies for artifact analysis and artifact discard following analysis may be used. To propose an alternative strategy please email a request for advice to archaeology@ontario.ca.

RHF Standards

1. Separately catalogue and analyze artifacts from all stratigraphic levels, cultural features and spatial distributions by both of the following:
    a) a functionally-based material culture classification
    b) the artifact classes and characteristics described in the 2011 Standards and Guidelines, Table 6.2
2. Include in the analysis of artifacts determinations of possible socio-economic status and cultural affiliation as part of the artifact analysis.

3. Sample coal, clinker, slag, charcoal, plaster, mortar, brick and wood in the field by selecting at least one of each material type, colour and size range. Record the material left in the field by:

    a. Stratigraphic layer
    b. Material type
    c. Estimated size range
    d. Colour if relevant
    e. Manufacture type, if known and relevant (e.g., brick)
    f. Estimate of quantity

6. Reporting Archaeological Fieldwork

Archaeological project reports for RHF sites provide detailed documentation of the methods, analysis and interpretation of results that inform a licensee's conclusions and recommendations.

In order to support conclusions and recommendations, the data generated during background research, fieldwork, and artifact and soil sample analysis needs to be correlated to establish a consistent narrative for the site. This will also help to identify outlying data (data that is inconsistent with established site patterns) that will also inform conclusions and recommendations.

In addition to the standards in the 2011 Standards and Guidelines, Section 7, the RHF standards below support consistent, correlated analysis and documentation of archaeological fieldwork and interpretation of results. The RHF standards in this section cover reporting requirements for all stages, as well as additional specific standards for Stage 2 and Stage 3 assessments. Stage 4 reports must meet the RHF standards in Section 6.1 below.

6.1 Project Reports: All stages

In addition to the reporting standards in the 2011 Standards and Guidelines, Section 7, reporting must meet the following RHF standards and provide detailed descriptions of how each RHF standard was addressed.

RHF Standards

1. Using tables and/or text, correlate and present summaries of the following:
    a. Site stratigraphy and integrity
    b. Artifact distributions from CSP, test pits and test units
    c. Artifact analysis
    d. Historical documentation
    e. Relevant built heritage or culture heritage landscape information
    f. Local and regional context
2. Identify and describe any gaps in the information above and describe how these may impact analysis, conclusions and recommendations.
3. Describe artifact analysis methodologies with a supporting reference to demonstrate the methodology's common use in Ontario.
4. Provide descriptions of any field sampling or discard strategies and include written support from the ministry regarding the strategy, in the supplementary documentation.
5. Provide clear colour photographs documenting the following:

a. Field conditions at the time of all instances and types of fieldwork
b. A representative sample of test pit and unit plan views and stratigraphy, minimum of five images
c. At least one image of an in-unit test pit ("sondage").
d. Cultural feature plan views and profiles
e. Unusual physical features affecting fieldwork strategy decisions

6. Provide clear colour photographs of artifacts representing all diagnostic and functional artifact classes.
7. Present artifact distributions from units on maps by temporal period/class/types to demonstrate settlement and functional patterns:
    a. Artifact counts on maps must clearly differentiate counts by stratigraphic layers (if present) from entire unit counts.
    b. Use multiple maps to describe the required information, if necessary.
8. If conclusions and recommendations differ from the established criteria in RHF Sections 2 and 3 for recommending further work:
    a. Use the 2011 Standards and Guidelines, Table 3.2 to provide a clearly constructed argument regarding the site's CHVI.
    b. Clearly describe the reasons for determining that the site does or does not have sufficient CHVI to warrant further assessment or mitigation.
9. Follow the standards in the 2011 Standards and Guidelines, Sections 7.8 and 7.9 for forming recommendations including detailed assessment and mitigation strategies.

6.2 Project Reports: Stage 2 Specific Standards

In addition to the reporting standards below, follow the 2011 Standards and Guidelines Section 7.

RHF Standards

1. To demonstrate that research includes all sources required in the 2011 Standards and Guidelines, Section 3.1, Standard 1, document all sources including those that did not provide useful information.
2. Where available and relevant, summarize information from assessments of built heritage resources or cultural heritage landscapes.
3. In addition to artifact catalogues required in the 2011 Standards and Guidelines, Section 6, describe the results of artifact analysis in text and summary tables.
4. Provide descriptions of any alternative artifact sampling or discard strategies.

5. For alternative artifact sampling or discard strategies, include written support from the ministry in the supplementary documentation.

6.3 Project Reports: Stage 3 Specific Standards

In addition to the reporting standards below, follow Section 7 of the 2011 Standards and Guidelines.

RHF Standards

1. Present artifacts distributions on maps by temporal period/class/types to demonstrate settlement and functional patterns.
2. To recommend that a broad, diffuse artifact scatter identified during CSP has no further CHVI, address the following in artifact and results analysis:
    a. Whether or not there is evidence of early occupation (i.e., artifacts dating to before 1830 or evidence that the site represents the first generation of settlement for an area).
    b. Whether or not higher density artifact concentrations are present within the overall site.
    c. Evidence from historical documentation.
    d. Comparisons of artifact density for similar sites within the same region.

7. Glossary

The following terms and definitions pertain to these standards and may differ from dictionary definitions.

Archaeological site

Ontario Regulation 170/04 under the *Ontario Heritage Act* defines an archaeological site as:

> "any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest".

For clarity, this does not mean that the entire property is an archaeological site. Only the parts of the property or properties identified as containing an archaeological site through archaeological assessment by a licensed archaeologist are considered a site.

Built Heritage Resource

The Provincial Policy Statement (2020) defines built heritage resources as a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the *Ontario Heritage Act*, or that may be included on local, provincial, federal and/or international registers.

Consultant archaeologist

An archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client. A consultant archaeologist must hold a Professional licence issued by the Ministry of Heritage, Sport, Tourism and Culture Industries (O.Reg. 8/06).

Correlate

Identifying relationships and patterns between various aspects of an archaeological site through analysis of historical documentation, fieldwork, settlement pattern, artifact and soil sample data.

Cultural Feature

The physical remains of human alteration at a given location that cannot be removed intact and are not portable in the way that artifacts can be removed and are portable. Typically, a cultural feature must be documented in the field, although samples can be taken. Examples include post moulds, pits, living floors, middens, earthworks, and various historical structural remains and ruins.

Cultural Heritage Landscape
The Provincial Policy Statement (2020) defines a cultural heritage landscape as a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the *Ontario Heritage Act*, or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms.

Cultural Heritage Value or Interest (CHVI)
For the purposes of the *Ontario Heritage Act* and its regulations, archaeological resources that possess cultural heritage value or interest are protected as archaeological sites under Section 48 of the Act. Where analysis of documented artifacts and physical features at a given location meets the criteria stated in the 2011 Standards and Guidelines, that location is protected as an archaeological site.

A site's degree of CHVI determines whether it has been sufficiently documented at any given stage of archaeological assessment or whether further assessment or mitigation is required. This is determined by applying the 2011 Standards and Guidelines, Table 3.2 to the combined analysis of an archaeological site's available historical, cultural and archaeological information.

Diagnostic Artifact
An artifact that possesses physical characteristics that can be dated based on known information about that type of material culture. For example, when dating historical artifacts, key indicators are date range of manufacture, median date and the date of maximum popularity or availability for the region of that specific artifact.

Deeply Buried
In urban, brownfield, floodplain and other contexts where soil or sediments have been deposited, original ground surfaces may be deeply buried and the sequence of deposition is often complex. These conditions require modified survey procedures to reduce the potential for missing or damaging intact archaeological resources.

Functional Material Culture Classification
A classification scheme that describes artifacts by functional groups and subgroups, reflecting how an artifact was originally used, as well as manufacturing and dating information. The Ontario Heritage Trust and Parks Canada use this kind of classification. For example, a fragment of a whiteware saucer could be catalogued as

Ceramic; Food Related; Tea wares; Saucer; Rim/Body; Whiteware; Transfer print; Blue; Pastoral scene; Charles Meakin, Hanley mark (1883-9).

Large Sites or Collections
Sites or collections are considered large in comparison with other sites:

- of similar age
- of similar cultural characteristics
- in the same definable region, or
- at the same stage of assessment

Email archaeology@ontario.ca for advice and to provide detailed evidence-based arguments for why a site or collection should be considered large within the context of similar sites.

Midden
An area of an archaeological site that has a concentration of artifacts and other remains that are usually interpreted as being the result of intentional discard focused at that location. Can include organic matter, tools, ceramics, building debris or anything discarded by the original inhabitants. A midden can be spread across the surface of a field, a buried layer, a pit or concentrated pile.

Multi-component sites
An archaeological site featuring more than one separate temporal, functional or cultural component.

Ontario Public Register of Archaeological Reports
Under Section 65(1) of the *Ontario Heritage Act* the ministry must maintain a register of archaeological reports. The ministry excludes information related to the locations of archaeological sites from the register. The register and reports are accessible to licensed archaeologists through PastPort and by request at archaeology@ontario.ca.

Socio-economic status
The status of an individual, family or group of people by combining both social and economic indicators as determined from both historical and material culture evidence. This provides a more accurate description of status in a society than a single indicator.

Stratigraphy/ Stratigraphic layers
Layers of soil that are progressively deposited through human or natural actions, that may hold artifacts and other materials from a single time period or activity. Stratigraphic layers are sometimes referred to as “lots”.

Underrepresented Groups

The documentation of Ontario's history has largely focussed on the British and European upper and middle-class experience. Indigenous peoples and other cultural, ethnic or socio-economic classes are not as well represented in historical documentation or the archaeology of the 19th century. Besides Indigenous communities, other ethnic, cultural, religious or local groups may have a connection to, and interest in, an archaeological site. Whether a group can be considered "underrepresented" in the archaeological record is contextual based on the archaeological site type, geographic location and time period. This will be identified during background research.

Appendix A – Applicable Sections of the 2011 Standards and Guidelines for Consultant Archaeologists

Section 2 - Stage 2 Property Assessment

Section 2.1.1

Standards

1. Actively or recently cultivated agricultural land must be subject to pedestrian survey.
2. Land to be surveyed must be recently ploughed. Use of chisel ploughs is not acceptable. In heavy clay soils ensure furrows are disked after ploughing to break them up further.
3. Land to be surveyed must be weathered by one heavy rainfall or several light rains to improve the visibility of archaeological resources.
4. Provide direction to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing.
5. At least 80% of the ploughed ground surface must be visible. If surface visibility is below 80% (e.g., due to crop stubble, weeds, young crop growth), ensure the land is re-ploughed and weathered before surveying.
6. Space survey transects at maximum intervals of 5 m (20 survey transects per hectare).
7. When archaeological resources are found, decrease survey transects to 1 m intervals over a minimum of a 20 m radius around the find to determine whether it is an isolated find or part of a larger scatter. Continue working outward at this interval until the full extent of the surface scatter has been defined.
8. Collect all formal artifact types and diagnostic categories. For 19th century archaeological sites, also collect all refined ceramic sherds (or, for larger sites collect a sufficient sample to form the basis for accurate dating).
9. Based on professional judgment, strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if it is necessary to conduct further assessment.

Section 2.1.2

Standards

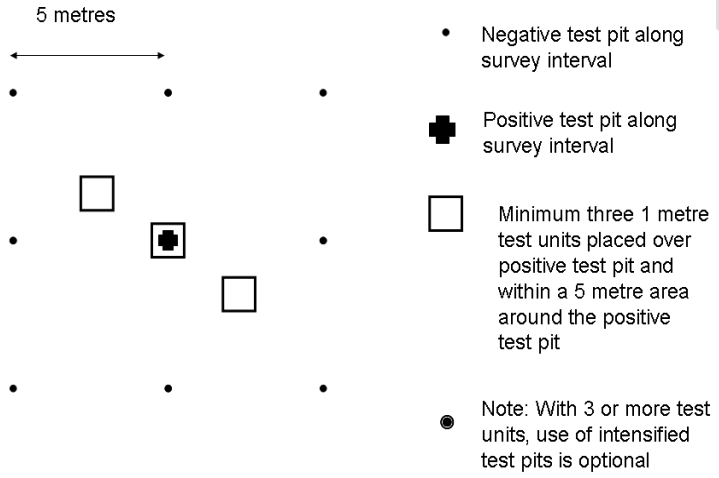
5. Ensure that test pits are at least 30 cm in diameter.
6. Excavate each test pit, by hand, into the first 5 cm of subsoil and examine the pit for stratigraphy, cultural features, or evidence of fill.
7. Screen soil through mesh no greater than 6 mm.
8. Collect all artifacts according to their associated test pit.

Section 2.1.3

Standard

1. Continue test pit excavation on the survey grid to determine whether there are further positive test pits. This may produce sufficient archaeological resources to meet the criteria for making a recommendation to carry out a Stage 3 assessment, in which case further Stage 2 fieldwork is not necessary.
2. When insufficient archaeological resources are found through continued survey on the grid to meet the criteria for continuing to Stage 3, intensify survey coverage around the positive test pit to determine whether a recommendation for a Stage 3 assessment can be supported. Use one of the following strategies (Option A or B):

Option B: See figure below. Excavate additional 1 m test units, as required, within 5 m of the positive test pit. If excavating three or more 1 m test units, intensified test pitting may be omitted.



If the area for test pit survey was reduced in Stage 1 under a special condition, and if archaeological resources are found during test pit survey within 50 m of an area recommended for exemption under that special condition, survey must be extended into the exempted area until survey has extended at least 50 m from the positive test pit.

Section 2.2

Standard

10. Artifacts, groups of artifacts or archaeological sites meeting the following criteria require Stage 3 assessment:

    a. pre-contact diagnostic artifacts or a concentration of artifacts (or both):
        i. within a 10 m by 10 m pedestrian survey area:

(1) at least one diagnostic artifact or fire cracked rock in addition to two or more non-diagnostic artifacts
(2) in areas east or north of the Niagara Escarpment, at least five non-diagnostic artifacts
(3) in areas on or west of the Niagara Escarpment, at least 10 non-diagnostic artifacts

ii. within a 10 m by 10 m test pit survey area:
(1) at least one diagnostic artifact from combined test pit and test unit excavations
(2) at least five non-diagnostic artifacts from combined test pit and test unit excavations

b. single examples of artifacts of special interest:
i. Aboriginal ceramics
ii. exotic or period-specific cherts
iii. an isolated Paleo-Indian or Early Archaic diagnostic artifact

c. post-contact archaeological sites containing at least 20 artifacts that date the period of use to before 1900. (Further guidance for evaluating the potential cultural heritage value or interest of post-1830 Euro-Canadian domestic sites is provided in 3 Stage 3: Site-Specific Assessment.)

d. twentieth century archaeological sites, where background documentation or archaeological features indicate possible cultural heritage value or interest

e. the presence of human remains

Section 3 - Stage 3 Site-specific Assessment

Section 3.1

Standards

1. Research the following information sources when available and relevant to the archaeological site:

    a. features or information identifying an archaeological site as sacred to Aboriginal communities

    b. individuals or communities with oral or written information about the archaeological site (e.g., Aboriginal communities, the proponent, professional and avocational archaeologists, local residents)

    c. historical settlement maps

    d. land titles or records, land registry documents

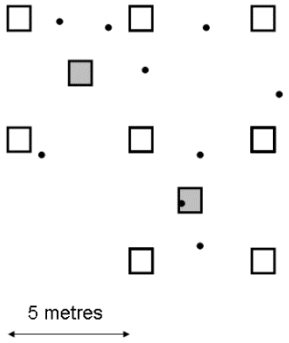
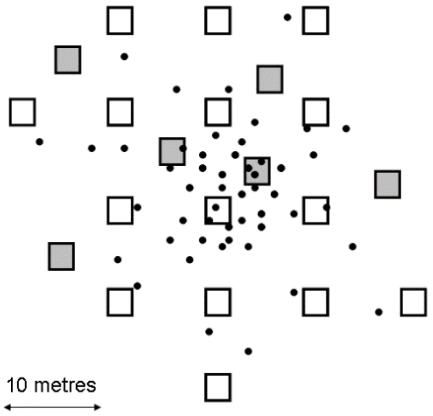
    e. historical land use and ownership records (e.g., assessment rolls, census records, Aboriginal land use records, commercial directories)

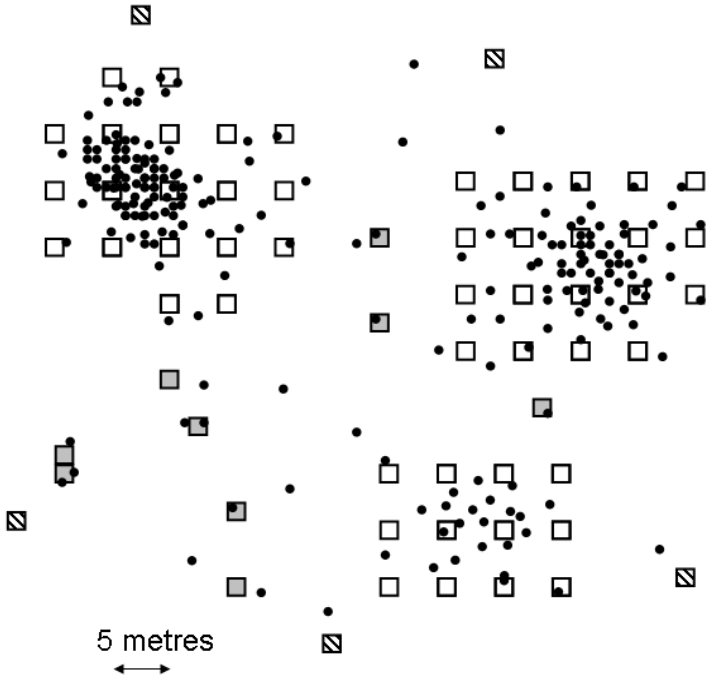
    f. primary historical document sources (e.g., diaries, manuscripts)

    g. secondary historical document sources (e.g., local and regional histories, academic research)

Table 3.1 Standards for determining the location and number of test units

Site type	Test unit strategy - Standards
Small pre-contact and post-contact sites where it is not yet evident that	1. Place and excavate 1 m square test units in a 5 m grid across the site (white squares below).

Site type	Test unit strategy - Standards
the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4	2. Place and excavate additional test units, amounting to 20% of the grid unit total (e.g., if the grid has 40 units, an additional 8 units), focusing on areas of interest within the site extent (such as distinct areas of higher concentrations within a broader artifact concentration or adjacent to high-yield units (shaded squares)). 
Small pre-contact and post-contact sites where it is clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4	3. Place and excavate 1 m square units in a 10 m grid across the site (white squares below). 4. Place and excavate additional units, amounting to 40% of the initial grid unit total (e.g., if the initial grid has 40 units, an additional 16 units), focusing on areas of interest within the site extent (such as distinct areas of higher concentrations within a broader artifact concentration, or adjacent to high-yield units (shaded squares)). 
Plough-disturbed, large, multi- or single-component lithic scatters	5. Place multiple grids 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 m square test units across those grids at 5 m intervals (white squares below).

Site type	Test unit strategy - Standards
	6. Place and excavate additional test units, amounting to 20% of the initial grid unit total (e.g., if the initial grid has 40 units, an additional 8 units), between the areas of concentration to document areas of lower concentration (shaded squares). 7. Place and excavate further additional units, amounting to 10% of the initial grid unit total (e.g., if the initial grid is 40 units, an additional 4 units), on the periphery of the surface scatter to determine the site extent and sample the site periphery (hatched squares). 
Large multi- or single-component lithic scatters found solely through a test pit survey	8. Place and excavate 1 m square test units in a 10 m grid across the site. 9. Place and excavate additional test units, amounting to 40% of the initial grid unit total (e.g., if initial grid is 40 units, an additional 16 units), focused in areas of interest within the site extent (such as small artifact concentrations or adjacent to high-yield units).
Woodland village sites	10. Place multiple grids, over all areas of artifact concentration indicating possible plough-disturbed middens. Excavate 1 m square test units across those grids at 5 m intervals. 11. Place and excavate an equal number of additional test units (e.g., if the grids over middens total 40 units, an additional 40 units) across the remainder of the site,

Site type	Test unit strategy - Standards
	either in a systematic grid or in focused areas, to recover a sample of topsoil deposits. 12. See section 3.3.2 *Alternative Strategies: Large Woodland villages* regarding test unit strategies for further information on defining the extent of this type of site.
Intact sites found in undisturbed contexts	13. Place and excavate 1 m square test units in a 5 m grid across the site. 14. In order to define site extent, place and excavate at least three adjacent test units along each grid line until yields of five or fewer artifacts are obtained for each test unit.
Other contexts (e.g., 19th century villages, industrial complexes)	15. Place and excavate 1 m square test units according to a strategy that balances systematic and focused test excavation across the site.

Section 3.2.1

Standards

1. If ground surface visibility has decreased in the time between the Stage 2 survey and the Stage 3 CSP, ensure that the site area is re-cultivated and weathered, following the standards set out for pedestrian survey in 2: *Stage 2: Property Assessment.*
2. Accurately map the location of all artifacts on the ground surface using a total station, transit and tape, stadia rod, or GPS unit. Record and catalogue artifacts by their mapped location, recording any relevant information (e.g., spatial relationship of diagnostics, artifact concentration areas). Tie this map to the general site GPS readings by recording a central point in the scatter.
3. For very large and dense surface scatters, conduct a full CSP by grid units (maximum 5 m by 5 m units) over the archaeological site. Record and catalogue artifacts with their grid unit designation.

Section 3.2.2

The purpose is to use controlled and systematic excavation to document the presence and extent of buried artifacts, structures, stratigraphy and cultural features, and to collect a representative sample of artifacts, across the entire archaeological site.

Standards

1. Excavate by 1 m square units.

2. To determine the placement of test units, establish a grid on the site based on the permanent datum to at least the accuracy of transit and tape measurements. Placing test units in unmeasured, estimated locations is not acceptable.

3. Excavate test units by hand. 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. Excavate test units by systematic levels (stratigraphic or standardized).

5. Excavate test units into the first 5 cm of subsoil, unless excavation uncovers a cultural feature.

6. If test unit excavation uncovers a cultural feature, do not excavate into feature fill. Instead:

    h. Record the exposed plan of the feature.

    i. Place geotextile fabric over the unit floor and backfill the unit.

7. Screen all excavated soil through mesh with an aperture of no greater than 6 mm. For confirmed single component Paleo-Indian and Early Archaic archaeological sites, for a sample of units (at least 20% of the total number of units in sandy soil and at least 10% of the total number of units in heavy soil), screen the entire contents of each unit through mesh with an aperture of no greater than 3 mm.

8. Unless otherwise specified in Tables 6.1 and 6.2 in section 6, or in the site-specific requirements stated in section 4.2, collect and retain all artifacts. Record and catalogue

them by their corresponding grid unit designation.

Section 3.2.3

The location and number of test units required varies depending on the type of site. Standards for the most common types of archaeological sites are shown in Table 3.1.

The objectives of a test unit placement strategy are to:

- provide a uniform level of data collection from across the site
- focus testing on key areas (e.g., site core, site periphery, areas of lower artifact concentration, isolated concentrations of diagnostics or classes of artifacts), as deemed appropriate based on professional judgment
- gather a representative artifact sample from across the site
- determine the nature of subsurface deposits
- determine the extent of the archaeological site
- support the recommendations for Stage 4 mitigation strategies

Standards

1. Use Table 3.1 to determine the location and number of test units appropriate to the site type.

Section 3.4

The information collected in Stage 3 is used to assess the cultural heritage value or interest of the archaeological site in order to determine whether Stage 4 mitigation of impacts is required, and as the basis for formulating Stage 4 strategies.

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.

Standards

1. The following site types always require Stage 4 mitigation:

    a. archaeological sites identified as sacred or as containing burials

    b. rare (unique, unusual) archaeological sites

c. Paleo-Indian archaeological sites (shows the earliest human occupation of the province), regardless of size or artifact yield

d. large, dense lithic scatters (very high yields of artifacts per unit)

e. Woodland period archaeological sites

f. post-contact archaeological sites dating to before 1830

g. late 19th and 20th century archaeological sites where background research (from any stage) or archaeological features clearly document cultural heritage value or interest

2. Aboriginal communities must be engaged when assessing the cultural heritage value or interest of an Aboriginal archaeological site that is known to have or appears to have sacred or spiritual importance, or is associated with traditional land uses or geographic features of cultural heritage interest, or is the subject of Aboriginal oral histories. This will have been determined through background research in Stage 1, detailed documentary research on the land use and occupation history early in Stage 3, and/or analysis of artifacts and other information recovered through archaeological fieldwork.

Section 3.4.1

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. 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. Small or diffuse lithic scatters possessing at least one of the following characteristics have cultural heritage value or interest and require Stage 4:

a. one or more test units yielding 10 or more artifacts

b. one or more test units yielding five to nine artifacts, including at least one diagnostic artifact

c. one or more Aboriginal ceramic sherds

d. one or more sub-surface cultural features

Section 3.4.2

In general, use the cultural heritage value or interest criteria in Table 3.2 to evaluate 19th century archaeological sites (commercial, industrial, institutional, religious and military) dating after 1830. The standards below apply to 19th century house and homestead archaeological sites, when neither the background documentation (from any stage) nor the archaeological features clearly indicate cultural heritage value or interest.

Standards

2. Sites with at least one of the following characteristics have cultural heritage value or interest and require Stage 4:

   a. In southern Ontario: most (80% or more) of the time span of occupation of the archaeological site dates to before 1870

   b. throughout Ontario (especially northern Ontario): the archaeological site is associated with the first generation of settlement of a pioneer or cultural group, even when the settlement was after 1870

Section 3.4.3

Archaeological sites not addressed by the above general and site-specific criteria may still possess cultural heritage value or interest and require Stage 4 mitigation of development impacts.

Standard

1. Apply the general criteria and indicators outlined in Table 3.2, *Cultural heritage value or interest criteria*, to determine whether Stage 4 mitigation of impacts is recommended.

Table 3.2 Indicators showing cultural heritage value or interest

Information value The archaeological site contributes to local, regional, provincial or national archaeological history.	
Criteria	**Indicators**
Cultural historical value	Information from the archaeological site advances our understanding of: 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
Historical value	The archaeological site is associated with: 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 historical figure, group, organization, or institution a significant historical event (cultural, economic, military, religious, social or political)
Scientific value	The archaeological site contains important evidence that contributes to: paleo-environmental studies testing of experimental archaeological techniques

Section 4 - Stage 4 Mitigation of Development Impacts
4.2 Approach 2: Excavation

4.2.1 General requirements for the excavation of archaeological sites

Through controlled removal and by recording the context, cultural features and artifacts, the cultural heritage value or interest of the archaeological site is documented and the information is preserved for future study. The following standards must be applied for all excavations.

Standards

1. All archaeological sites for which Stage 4 excavation is carried out must be excavated by hand. Exceptions where machinery may be used are described under *Excavation by mechanical topsoil removal (topsoil stripping)* in section 4.2.3 and *Deeply buried or complex stratified archaeological sites* in section 4.2.8.
2. Before carrying out fieldwork, review all available relevant reports of previous fieldwork on the archaeological site or property.
3. Carry out excavation when weather and lighting conditions permit identification of subsurface cultural features and safe recovery of artifacts. Do not carry out excavation when weather and lighting conditions (e.g., snow cover, frozen ground, conditions of excessive rain or drought, heavy fog) may cause damage to artifacts or reduce the opportunity to identify and document any part of the archaeological site.
4. Using the Global Positioning System (GPS) according to the requirements set out in section 5, record the locations of a permanent datum that can be tied to a development map directly.
5. To determine the placement of excavation units, and for use in recording cultural features and artifact locations, establish a grid on the site based on a datum tied to permanent landmarks (e.g., Ontario Land Surveyor

Guidelines

1. Sampling may be used as a means to reduce the degree or intensity of the archaeological fieldwork while still accomplishing the objectives for Stage 4 excavation. Sampling strategies may vary by site and assemblage and may be determined based on professional judgment. Sampling may be acceptable, provided that the following conditions are met:
   d. The sampling strategy was recommended in the Stage 3 project report and accepted by the ministry. Cite references and provide supporting information for the proposed strategy.
   e. Sampling will be applied to sites or assemblages such that there will be no risk that the minimum levels of expected information will not be acquired. In general, this means that sampling should only be applied to large sites or sites where very large numbers of a class of artifact or feature are present (e.g., large quantities of lithic debitage).
   f. Sampling must ensure representation from all meaningful contexts across a site (e.g., cultural features, individual spatial or functional areas such as within a longhouse or across a block of excavation units).

survey points) to at least the accuracy of transit and tape measurements. Placing excavation units in unmeasured, estimated locations is not acceptable.

6. Excavate by systematic levels (stratigraphic or standardized).
7. Excavate all cultural features by hand (by shovel or by trowel).
8. Unless otherwise specified in the site-specific requirements outlined below, retain all artifacts and any other recovered materials for review in the lab. After lab review, any discards must comply with standards and guidelines in section 6 *Artifact Documentation and Analysis.*
9. Document all cultural features with photographs and drawings including plans and profiles of those cultural features. Include scales and north orientation in all documentation.
10. In the case of partial excavation of an archaeological site, when the remainder is to be left intact through incorporation strategies, record any exposed faces, shore up the faces to avoid collapse, and then backfill them.
11. Document all fieldwork in detail, including the following:
    a. field notes, maps, and photographic records of all field methods, archaeological findings, and unusual or difficult situations encountered in the field
    b. description of field conditions or unusual physical features affecting fieldwork strategy decisions or identification of artifacts or cultural features (e.g., heavy and wet soils, dense root mats, boulders, rubble)
    c. logs of photographic documentation, maps and graphics

4.2.2 Excavation by hand

All archaeological sites for which Stage 4 excavation is carried out, whether single- or multi-component, must be excavated partly or completely by hand. Hand excavation recovers more data than mechanical topsoil removal does. It is the preferred technique for documenting the full range of materials and formation processes at an archaeological site.

The following are general standards for all archaeological sites or parts of archaeological sites excavated by hand.

Standards

1. Remove plough zone soil or topsoil by hand and screen the soil.
2. Excavate in one metre square units.
3. Excavation of the core of the site must include the following:
   a. the main concentration of artifacts in the surface scatter
   b. the concentration of positive test pits
   c. the area around all high-yielding Stage 3 test units
4. Excavate units positioned diagonally from high-yielding excavation units (as defined by Table 4.1 *Determining the extent of excavations)*.
5. Screen all excavated soil through mesh with an aperture of no greater than 6 mm. For confirmed single component Paleo-Indian and Early Archaic archaeological sites, for a sample of units (at least 20% of the total number of units in sandy soil and at least 10% of the total number of units in heavy soil), screen the entire contents of each unit through mesh with an aperture of no greater than 3 mm.
6. Excavate into the first 5 cm of subsoil, unless excavation uncovers a cultural feature.
7. If excavation uncovers cultural features:
   a. Clean all exposed subsoil surfaces by shovel (“shovel shine”) or trowel to aid in identifying any subsurface cultural features.

Guidelines

1. Based on the consultant archaeologist’s professional judgment, when the site type indicates that artifacts measuring less than 6 mm may be present (e.g., very small lithic flakes, seed beads) and should be recovered, some or all excavated soil may be screened through 3 mm mesh or water screened.
2. Very heavy soils may be water screened.

b. Document invisible (ghost) features through horizontal and vertical mapping of artifact concentrations extending into the subsoil (i.e., piece-plotting).
c. Extend excavation, regardless of yield, 2 m (i.e., two excavation units) beyond any cultural features uncovered.
d. Excavate a cultural feature only when it has been completely exposed (i.e., not in sections corresponding to excavation units).
e. If there is potential for or documentation of cultural features outside the core of the archaeological site, mechanically remove topsoil in those areas after completing the hand excavations within the core.

4.2.3 Excavation by mechanical topsoil removal (topsoil stripping)

The rationale for topsoil stripping is that the careful documentation of intact archaeological resources as described below offsets the loss of fragmentary information in the topsoil layer.

Because of the greater risk mechanical topsoil removal poses to the preservation of archaeological resources, this method must be used with caution, and only where indicated as appropriate in these Standards and Guidelines.

The following are general standards for all archaeological sites or parts of archaeological sites excavated by mechanical topsoil removal.

Standards

1. Mechanical topsoil removal may supplement hand excavation only if the archaeological site meets all of the following conditions:
   a. The archaeological site has been subject to ploughing for many years.
   b. The archaeological site has only one cultural stratum below topsoil.
   c. The extent of the archaeological site is large.
   d. The cultural affiliation of the archaeological site (Woodland or later) gives rise to a reasonable

Guidelines

expectation that extensive sub-surface cultural features and settlement data may be present.

e. Stage 2 and Stage 3 assessments have documented a representative sample of ploughzone artifacts and their distribution.

2. To avoid damage to the underlying archaeological site, use heavy machinery that pulls soil away (e.g., excavator, backhoe with flat-edged bucket, grader with extendable arm). Machinery that pushes soil (e.g., bulldozer, belly scraper) is not an acceptable alternative. Pushing soil directly across the previously undisturbed and newly exposed subsoil surface of an archaeological site must be avoided as this has the potential to cause increased damage.
3. Mechanical topsoil removal must stop at or above the topsoil/subsoil interface. Never use mechanical removal below the topsoil level. If soil conditions do not allow mechanical topsoil removal without intruding into subsoil (e.g., very wet or dry soil conditions), delay mechanical topsoil removal until conditions are appropriate or remove topsoil by hand.
4. Do not allow exposed subsoil surfaces to dry out such that cultural features cannot be identified. If there is a pause in the hand excavation, cover all mechanically stripped areas with tarpaulins and straw or soil.
5. Switch to hand excavation by shovel if it appears that mechanical topsoil removal may be affecting the integrity of cultural features or the recovery of surface artifacts. The following are indications that this is the case:
   a. The archaeological site reveals few or no cultural features (e.g., in deeply plough-disturbed areas or as a result of site occupation activities).
   b. Cultural features expected to contain artifacts (e.g., midden deposits in village sites) do not appear to contain many or any artifacts.
6. Clean all exposed subsoil surfaces by shovel (“shovel shine”) or trowel following mechanical topsoil removal.

4.2.7 Site-specific requirements: 19th century domestic archaeological sites

When 19th century archaeological sites are found undisturbed, hand excavation is required (see the site-specific requirements for undisturbed sites outlined in section 4.2.9). In plough-disturbed settings, it is usually possible to use a combination of hand excavation and mechanical topsoil removal.

Standards

1. For archaeological sites that mostly date to before 1830, hand excavate the ploughzone in the core of the surface scatter and where Stage 3 unit yields are highest. Excavate the entire extent of all cultural features (e.g., cellars, privies) by hand.
2. At archaeological sites that mostly date to after 1830, hand excavate all midden areas and follow with mechanical topsoil removal on the remainder of the archaeological site. Clean the exposed subsoil surface by shovel ("shovel shine") or trowel.
3. Hand excavate a minimum of two opposing quadrants (e.g., northeast and southwest quadrants) in larger cellar features and record all exposed profiles.
4. Excavate large and complex structural features according to the requirements for complex stratified sites (see below).
5. Document architectural or structural remains (e.g., foundation footings, stone-lined wells, brick or stone paths or patios) with scale drawings and photographs. Where excavation requires the removal of architectural or structural remains, map and draw them and hand excavate any intact cultural layers beneath.

Guidelines

1. Based on professional judgment, when conducting excavation of larger cellar features, the consultant archaeologist may excavate all four quadrants and may use mechanical means to remove heavy post-use fill above living strata.
2. When warranted for health and safety reasons, excavation and documentation of deep stone-lined wells may be limited to the following:
   c. exposing and mapping the surface
   d. documenting construction details by excavating one side and removing the well wall and any rubble or fill to a maximum depth of 2 m
3. Based on professional judgment, the following categories of artifacts may be counted and discarded in the field instead of in the lab as long as these artifacts are recorded according to the guidelines in 6 *Artifact Documentation and Analysis*:
   e. structural and building artifacts (bricks, plaster, mortar, concrete and asphalt)
   f. fuel-related artifacts (clinker, coal, slag)

Section 6 - Artifact Documentation and Analysis

Standards

1. Cite the sources used when employing or referencing formal typologies established in the literature to describe category terms or type classifications.
2. In Stage 4 excavation projects, analyze only complete assemblages. Include all materials recovered from soil flotation when samples have been taken. Retain soil samples and recovered fractions as part of the collection until they have been processed and sorted.
3. Include in the project report, as a minimum, the standard analysis set out in Table 6.3 in the documentation of any Stage 4 excavation project. The analysis is to be based on the recovered assemblage from both the excavation and the processed flotation samples (light and heavy fractions) taken from feature contexts.
4. For unstable artifacts (individual or classes) with a high risk of deterioration and loss of interpretive integrity in storage, record their condition and document, as needed, any additional information that may be lost (e.g., analytically meaningful details that may be obscured or lost, measurements that may change).
5. 5. For large assemblages of unstable artifact classes (e.g., nails), measure 100 specimens per meaningful context (i.e., a feature that is temporally discrete or associated with a specific structure or functional area) to provide necessary documentation to augment basic counts.
6. 6. Include an artifact catalogue in the project report. In addition to the artifact catalogue, artifact documentation may be included as tables in the text of the report. Catalogues must be prepared as follows:
    a. Each entry must have a catalogue number.
    b. Each entry must identify the quantity of a class of artifacts at a specific spatial location within the site (e.g., test unit, test pit, surface collection, stratum, feature, block excavation unit).
    c. Artifact classes must be separately catalogued to at least the level of analysis required by Tables 6.1, 6.2 and 6.3.
    d. The catalogue must correspond to the packed collection (e.g., list artifacts by box).
7. Ensure that the project report includes the size of the packed collection (e.g., number and size of boxes) and long-term curation plans.
8. Sampling is acceptable only when analyzing certain types of artifacts, under certain conditions. Table 6.1 provides standards (full count) and guidelines (including sampling guidelines) for Aboriginal artifacts. Table 6.2 provides the same for European and other non-Aboriginal manufactured artifacts.

Table 6.2

Table 6.2 European and other non-Aboriginal manufactured artifacts

Material/artifact type	Standards (required)	Guidelines (optional)
Ceramics • Includes undecorated sherds, decorated sherds and rim sherds, but also includes complete or nearly complete objects	1. Provide counts, by excavation context, by: • type and colour (e.g., earthenware, stoneware, porcelain, pearlware, ironstone) • glaze type (e.g., salt-glazed, unglazed) • decorative technique and colours • function of object when known (e.g., cup, saucer, plate, bowl, inkwell, chamber pot, teapot) 2. Provide description of maker's marks or other manufacturer's information where evident, including: • date ranges • heat-altered items • For both formal typologies and reference to date ranges, cite the relevant source	• minimum vessel counts • measurements • vessel size or circumference • vessel profiles

Material/artifact type	Standards (required)	Guidelines (optional)
Glass • Includes bottles, glassware, window glass, other household and personal objects (e.g., chimney glass, beads, buttons)	3. Provide counts, by excavation context, by: • functional type (e.g., platter, bowl, medicine bottle, soda bottle) • colour • technique of manufacture 4. Provide description of maker's marks or other manufacturer's information where evident, including: • description of categories (e.g., military hardware; coins) • date ranges • heat-altered items • For unidentified scrap and fragments, record counts by excavation context and by material • For both formal typologies and references to date ranges, cite the relevant sources	• minimum vessel counts • measurements (for window glass, this may be measurement of total area) • decorative patterns • vessel profiles

All other inorganic, organic and composite artifacts • Includes metals, stone, plaster, bone, shell, ivory, horn, rubber, wood, leather, textiles, paper, plastics and other synthetics	5. Provide counts, by excavation context, by: • material (or materials if composite) • technique of manufacture • surface finish, decorative techniques where evident • object type • functional category	• weight • measurements • decorative patterns

Material/artifact type	Standards (required)	Guidelines (optional)
	6. Provide description of maker's marks or other manufacturer's information where evident, including: • description of categories (e.g., military hardware; coins) • date ranges • heat-altered items • For unidentified scrap and fragments, record counts by excavation context and by material • For both formal typologies and references to date ranges, cite the relevant sources	

Sampled classes of artifacts • Includes architectural materials sampled in the field (e.g., brick, plaster, coal, slag, clinker)	7. Description of retained material 8. Count of retained material 9. For material left in the field, provide descriptions by category of material/artifact type and estimates of quantities as appropriate	

Table 6.3

Table 6.3 Specialist studies – Stage 4 excavation only		
Material type/description	**Standards (required)**	**Guidelines (optional)**
Faunal remains	1. Provide counts, by excavation context, identified to the lowest identifiable taxon. 2. Provide separate counts of all heat-altered specimens.	• element identification • bone modifications or cut marks • species seasonality and range

Material type/description	Standards (required)	Guidelines (optional)
		• estimates of Minimum Number of Individuals (MNI) or Minimum Number of Elements (MNE) Sampling: • Except in the case of Paleo-Indian or Early Archaic sites, sampling may be used to reduce the scale of analysis of faunal assemblages of over 500 specimens. (For the remainder of the faunal material from these sampled contexts, only identification to class is required.) • Sampling may not be used to reduce the minimum to less than 500 specimens described over all.

		• Sampling must ensure representation from all meaningful contexts across a site (e.g., cultural features, or individual spatial or functional areas, such as within a longhouse or across a block of excavation units) and ensure representation of taxa. • Sampling strategies may vary by site and assemblage and may be determined based on professional judgment. In the report, cite references and provide supporting information for the strategy adopted.
Material type/description	**Standards (required)**	**Guidelines (optional)** • The report must indicate how diversity and frequency have been sampled across classes and element sizes.
Floral remains	3. Provide counts by excavation context, identified to the lowest identifiable taxon. 4. For carbonized wood, identify tree species for 10 specimens per excavation unit/feature context, when available	• wood, plant and seed weights • species seasonality and range • Provide environmental reconstructions based on identified material. • Identify cultural uses for the plants identified

		Sampling: • For large floral assemblages of over 100 specimens, sampling may be used to reduce the scale of analysis (For the remainder of the floral material from these sampled contexts, only identification to class is required.) • Sampling may not be used to reduce the minimum to less than 100 specimens described over all. • Sampling must ensure representation from all meaningful contexts across a site (e.g., cultural features, individual spatial or functional areas such as within a longhouse or across a block of excavation units), and representation of taxa.

Material type/description	Standards (required)	Guidelines (optional)
		• Sampling strategies may vary by site and assemblage and may be determined based on professional judgment. In the report, cite references and provide supporting information for the strategy adopted. • The report must state how diversity and frequency were sampled.
Radiocarbon dates This is only required for Stage 4 excavations when • material has been recovered in sufficient quantity to permit radiocarbon dating (e.g., organic, carbonized); and • dating will be of value to site interpretation (i.e., at a pre-contact site)	5. Documentation through two dates from short-lived organic material 6. Samples must be from well-documented, sealed deposits (e.g., cultural features, post moulds, middens), either recovered during excavations or by flotation 7. If multiple radiocarbon samples are available for future additional dating, collect and preserve these samples to avoid contamination and keep them with the site collections.	• A single date may suffice for Late Woodland sites, based on professional judgment. • Provide a suite of dates, if circumstances and site characteristics allow for this.
Other studies		• other specialist studies, based on professional judgment • reports regarding conservation of unstable artifacts, as appropriate

Standards

Section 7.8 Project Reports Stage 2
7.8.4 – Recommendations General

Standards

1. For each archaeological site, provide a statement of the following:
    a. Borden number or other identifying number
    b. whether or not it is of further cultural heritage value or interest
    c. where it is of further cultural heritage value or interest, appropriate Stage 3 assessment strategies (see section 3 Stage 3: Site-Specific Assessment)
2. Make recommendations only regarding archaeological matters. Recommendations regarding built heritage or cultural heritage landscapes should not be included.
3. If the Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts, recommend that no further archaeological assessment of the property be required.

7.8.5 – Recommendations: Partial Clearance

Standards

1. A recommendation for partial clearance may only be made if all of the following conditions are met:
    a. Stage 2 archaeological fieldwork has been completed within the entire project limits. (Archaeological sites are present that still require Stage 3, and possibly Stage 4, archaeological fieldwork.)
    b. The recommendation forms part of a final report on the Stage 2 work.
    c. The recommendation includes a request for the ministry to provide a letter confirming that there are no further concerns with regard to alterations to archaeological sites for some specified part of the project area.
    d. The Stage 2 report includes recommendations for further archaeological fieldwork for all sites that meet the criteria requiring Stage 3 archaeological assessment.
    e. The following documentation is included in the project report package:
        i development map showing the location and extent of all archaeological sites for which Stage 3 archaeological assessment is recommended, including a 20 m protective buffer zone for each site, and a 50 m monitoring zone for each site
        ii detailed avoidance strategy, and written confirmation from the proponent regarding the proponent's commitment to implementing the strategy and confirmation that

ground alterations (e.g., servicing, landscaping) will avoid archaeological sites with outstanding concerns and their protective buffer areas

iii construction monitoring schedule, and written confirmation from the proponent that a licensed consultant archaeologist will monitor construction in areas within the 50 m monitoring buffer zone, and that the consultant archaeologist is empowered to stop construction if there is a concern for impact to an archaeological site

iv timeline for completing remaining archaeological fieldwork

Section 7.9 Project Reports Stage 3
7.9.4 – Recommendations for Stage 4

Standards

1. If it is concluded that an archaeological site has further cultural heritage value or interest, make recommendations on appropriate Stage 4 mitigation strategies (see section 4 Stage 4: Mitigation of Development Impacts), as follows:
   a. Recommendations must be informed by input from Aboriginal communities for the types of Aboriginal archaeological sites specified in 3.5 Formulation of Stage 4 strategies.
   b. Recommendations must be detailed enough to give a clear and accurate understanding of the actions required.
   c. If reporting on more than one archaeological site in one report, make recommendations for each site individually.
2. For archaeological sites that have further cultural heritage value or interest that requires Stage 4 mitigation of impacts, the preferred approach is avoidance and protection. The report must include a summary of the advice provided to the proponent regarding protection and avoidance, including the results of engagement with Aboriginal and other communities
   a. If it is determined that avoidance and protection is the preferred approach, provide that recommendation, including the details of the proposed approach including appropriate avoidance and long-term protection strategies. For details, see section 4.1 Approach 1: Avoidance and Protection.
   b. If it is determined that avoidance and protection is not viable, provide the basis for that determination.
3. If it is determined that excavation is the preferred approach to Stage 4 mitigation of impacts, the recommendation must include a detailed strategy for excavation and documentation, based on 4.2 Approach 2: Excavation.

4. If it is determined that long-term protection is the preferred approach to Stage 4 mitigation of impacts, the recommendation must include a detailed description of the preferred protection mechanism. For details, see section 4.1.4 Long-term protection.
5. If it is determined that the site has no further cultural heritage value or interest at the conclusion of Stage 3, recommend that Stage 4 mitigation of impacts is not required for the site.

7.9.5 Recommendations for special conditions: Partial clearance

Standards

1. When making a recommendation for partial clearance at the conclusion of Stage 3, the following requirements must be met:
    a. Buffer zones around Aboriginal Woodland village sites must be a minimum of 20 m.
    b. Buffer zones around all other archaeological sites must be a minimum of 10 m.
    c. For all other matters, apply the requirements stated for Stage 2 partial clearance and for Stage 4 avoidance.