

British Columbia Archaeological Resource Management Handbook for Foresters

Table of Contents

- Introduction to this Handbook

PART 1 Legislative and Administrative Framework

- Archaeological and Cultural Heritage Site Definitions
- Legislation and Administration

PART 2 Forestry and the Archaeological Resource Management Process

- **Planning: Archaeological Planning in a Forestry Context**
 - Figure 1. Archaeological Resource Management Process for Forestry
- Archaeological Field Assessment Studies
- Archaeological Site Impact Management Studies: Heritage Investigation Permits
- Development Permitting: Site Alteration Permits
- Accidental Site Damage and Emergency Impact Management
- Resource Management Qualifications for Archaeologists

Introduction to this Handbook

Archaeological sites are protected by the *Heritage Conservation Act*. Impacts to these sites resulting from forestry operations must be avoided or managed by the forest licensees.

This handbook has been developed to support foresters in effectively and efficiently managing archaeological resources as part of forestry operations. The handbook contains information on:

- a definition of archaeological sites and their relationship to cultural heritage resources regulated by the Forest and Range Practices Act
- the Provincial legislation and administrative framework in place to manage archaeological resources
- recommended archaeological planning studies to identify areas of archaeological sensitivity
- required field work to operate in an area containing archaeological sites
- necessary permitting to operate within a protected archaeological site,
- steps to take when archaeological sites are accidentally damaged, and
- qualifications to look for when engaging an archaeologist specializing in resource management

This handbook has been adapted from the British Columbia Archaeological Resource Management Handbook.

PART 1 Legislative and Administrative Framework

Archaeological and Cultural Heritage Site Definitions

Archaeological Sites

Archaeological sites consist of the physical remains of past human activity. The scientific study of these remains, through the methods and techniques employed in the discipline of archaeology, is essential to the understanding and appreciation of precontact and historic cultural development in British Columbia. These sites may be of regional, provincial, national or international significance.

Some examples of archaeological sites include: an 8,000 year old campsite in the Fraser River Canyon, an 18th century fur trade fort on the Peace River, a three hundred year old grove of culturally modified trees near Prince Rupert, and a 19th century shipwreck off the West Coast.

These non-renewable sites are very susceptible to disturbance and are finite in number. Archaeological sites are managed for their historical, cultural, scientific and educational value to the general public, local communities and First Nations.

Protection and management of impacts to archaeological sites is governed by the *Heritage Conservation Act*.

Cultural Heritage Resources

The term cultural heritage resources applies to a large spectrum of heritage resources that is defined in the *Forest Act* as “an object, a site or the location of a traditional societal practice that is of historical, cultural or archaeological significance to British Columbia, a community or an aboriginal people.”

Under the *Forest and Range Practices Act* Regulations, objectives set by government for cultural heritage resources are to conserve, or, if necessary, protect cultural heritage resources that are:

- (a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and
- (b) **not regulated under the *Heritage Conservation Act*.**

Traditional Use Sites

Traditional use sites are localities identified by First Nations’ communities as important areas of traditional practice. There can be a correspondence between archaeological and traditional use sites, as areas of traditional practice may contain physical remains of past human activity. However, traditional use often does not leave any detectable, physical evidence. Issues concerning traditional use sites are usually related to aboriginal rights and title.

Traditional use sites are not protected by the *Heritage Conservation Act*, but can be managed under the *Forest and Range Practices Act*. Traditional use sites are identified through consultation with First Nations.

Legislation and Administration

Legislation

Site Protection

In British Columbia, archaeological sites are protected by the *Heritage Conservation Act*. Two mechanisms within the *Act* are used to protect sites: designation and automatic protection. Designation is a process to protect a *specific* identified site; automatic protection is a tool to safeguard *all* sites of certain types.

[Several types of sites are automatically protected by the legislation.](#) These types include localities containing physical evidence of human use or activity predating 1846, burial places, and aboriginal rock carvings or paintings. Most of the archaeological sites within British Columbia are protected because they contain physical evidence that predates 1846. This legislation applies equally to sites on public or private land and to unknown sites as well as recorded ones.

You should note that the vast majority of archaeological sites within the working forest are protected through the automatic protection provision of the legislation, not the designation process.

Site Alteration

The *Act* protects sites but also allows for their alteration under a [Site Alteration Permit](#). These permits are issued by the Archaeology Branch. The *Act* affords considerable discretionary authority in determining if, and under what conditions, such permits are to be granted.

The *Act* also allows for a heritage inspection to assess the archaeological significance of land or other property. The inspection, conducted under a heritage inspection permit, identifies and assesses sites protected under the *Act*. In addition, there is provision for heritage investigations. An investigation is undertaken through a heritage investigation permit in order to recover information which might otherwise be lost as a result of site alteration or destruction.

Remedies and Penalties

The *Act* also provides for [heritage inspection or investigation orders](#), [temporary protection orders](#), [civil remedies](#) and [penalties](#) to limit contraventions. These powers provide:

- the Province with the ability to inspect a site or halt work to prevent site alteration, and
- the Courts with the ability to issue an injunction to restrain contravention of the *Act* or, where there has been a breach of the *Act*, impose penalties of not more than:
 - a fine of \$50,000 and 2 years imprisonment for an individual
 - a fine of not more than \$1,000,000 for a corporation
 - a fine of \$50,000 or 2 years imprisonment for an employee, officer, director or agent of the corporation

Administrative Framework

The Archaeology Branch is responsible for the administration of the *Heritage Conservation Act* as it applies to archaeological sites. The forestry related role of the Archaeology Branch is to:

- ensure that archaeological resource management is integrated into forestry planning and operations
- act as a central repository for archaeological information
- administer the archaeological permitting process
- make balanced decisions regarding the need to conserve heritage values with other land uses and values
- assisting with investigations of *Heritage Conservation Act* contraventions where necessary

The Archaeology Branch assists forest licensees by:

- supporting the Forest Investment Account programme through eligibility criteria and application reviews
- storing and distributing archaeological site information, archaeological overview assessment mapping and reports, and providing access to Archaeological Impact Assessment reports
- reviewing heritage permit applications, issuing heritage permits and providing quality assurance reviews of permit deliverables
- developing archaeological resource management requirements

PART 2 Forestry and the Archaeological Resource Management Process

For foresters, archaeological resource management breaks into three major phases; planning, field assessment studies and development permitting. Each phase is detailed below and included in an overall process diagram found on page eight. Also included in Part 2 are brief sections on accidental site damage and the qualifications for archaeological resource management work.

Planning: Archaeological Planning in a Forestry Context

Introduction

The planning phase of archaeological resource management in forestry determines where archaeological field studies are required. Field studies will identify and assess archaeological resources, ultimately resulting in the archaeological resource management decisions that will allow forestry operations to proceed.

Archaeological site protection under the *Heritage Conservation Act* applies whether the archaeological site has been recorded or the site location remains unknown. Therefore, planning must include known site locations and a method for identifying areas with the potential to contain protected but unrecorded archaeological sites.

Obtaining Known Archaeological Site Locations

The Archaeology Branch maintains an inventory of records for known archaeological sites protected under the *Act*. Forest planners may request known site locations through the Archaeology Branch website at <http://www.tsa.gov.bc.ca/forms/arch/datarequest.htm>.

Alternatively, an archaeological consultant may be retained to access this information and provide professional interpretation of the records.

Identifying Areas of Archaeological Potential

Two methods are used to identify operational areas with the potential to contain protected but unrecorded archaeological sites: archaeological overview assessment mapping and an archaeological review.

Archaeological Overview Assessment (AOA) Mapping

An AOA study is a review of an area by professional archaeologists to provide information (including maps) of archaeological resource potential and distribution in the study area. AOA studies compile existing knowledge about recorded archaeological site locations and early First Nations land use in the area. This information is used to build a model of where archaeological sites should be located. The resulting AOA mapping divides the landscape into areas of potential to contain archaeological sites. If a mapped area of

archaeological potential overlaps with a proposed forestry operation, a Preliminary Field Reconnaissance is conducted to confirm the archaeological potential rating and need for a further archaeological field inspection.

AOA studies are eligible for Forest Investment Account funding under the Land-Base Investment Program. Information concerning these studies and eligibility rules are available at:

<http://www.for.gov.bc.ca/hcp/fia/landbase/archaeology.htm>

The Archaeology Branch is the repository for some AOA studies completed for the Province under the Land and Resource Management Plan process and larger AOAs completed under FIA funding. AOA mapping can be requested from the Archaeology Branch using the online data request form at:

<http://www.tsa.gov.bc.ca/forms/arch/datarequest.htm> It should be noted that AOAs need professional archaeological interpretation to be most effective.

Archaeological Review

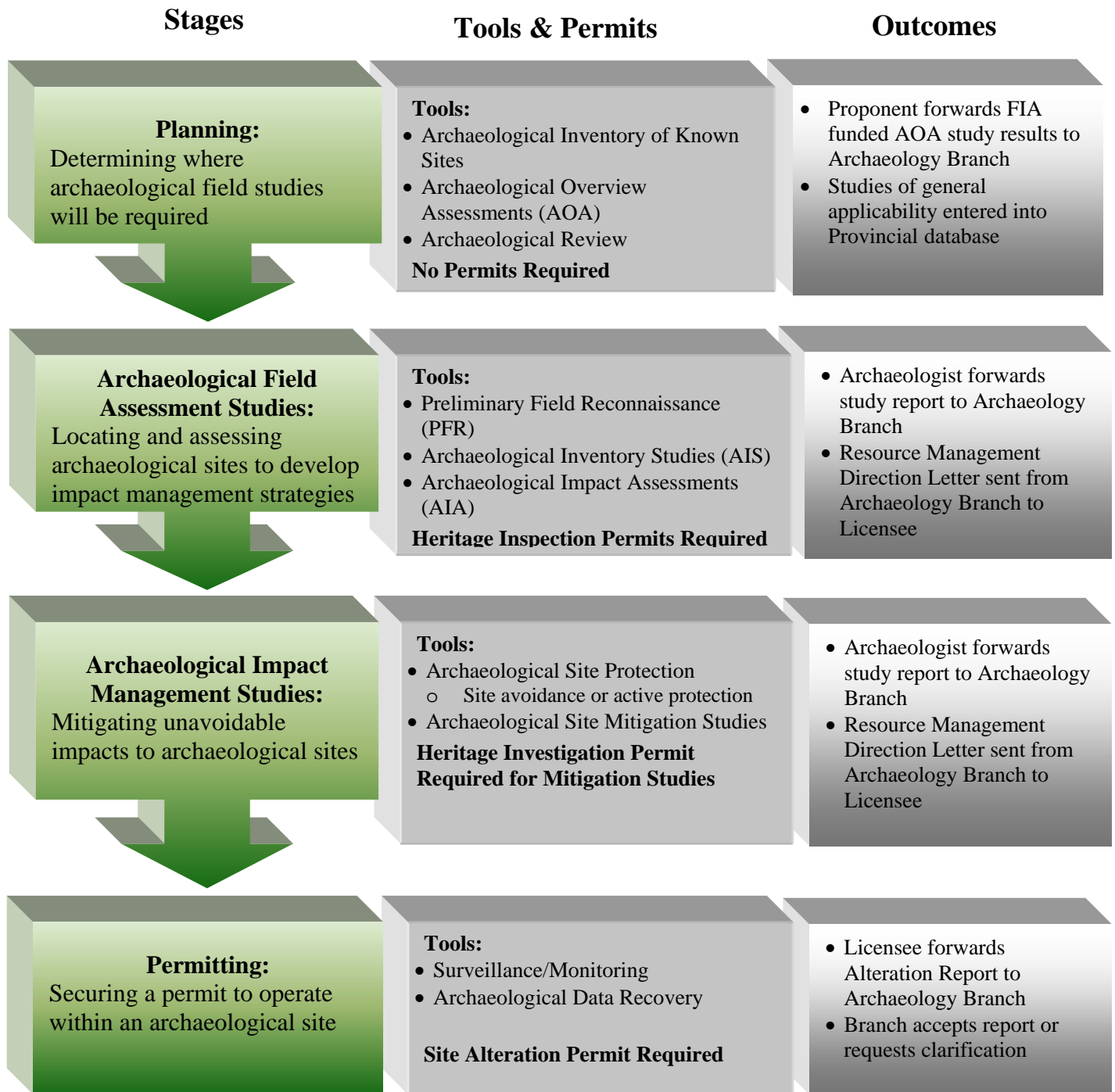
Instead of conducting a large archaeological overview assessment study, many forest companies with limited operational areas refer proposed forestry operations to a qualified archaeological consultant to determine where field studies are recommended or required. These archaeological reviews compile known site locations, site potential and expert knowledge of the area, and result in brief summary reports determining the need for field study in each operation.

Professional archaeological consultants capable of undertaking archaeological reviews can be contacted through the British Columbia Association of Professional Archaeologists at <http://www.bcapca.bc.ca>. Other consulting archaeologists may choose to use internet and telephone advertising services.

Archaeological Planning Studies – Tips for Foresters

- Archaeological reviews are most effective for small operations
- Multi-year larger operations will benefit by completing an AOA for planning purposes

Figure 1: Archaeological Resource Management Process for Forestry



Archaeology Branch Permitting and Assessment staff may be [contacted](#) to provide clarification and interpretation of the processes where necessary.

Additional information on archaeological resource management can be found on our webpage at: <http://www.tsa.gov.bc.ca/archaeology/index.html>

Archaeological Field Assessment Studies

Introduction

Archaeological field assessment studies are used to confirm the archaeological potential of an area (Preliminary Field Reconnaissance), identify and map the location and extent of archaeological sites (Archaeological Inventories), and evaluate site significance and magnitude of adverse impacts when sites cannot be avoided (Archaeological Impact Assessments). These studies are often combined to reduce field costs and time.

Any archaeological field study involving land or site alteration requires a heritage permit, issued by the Archaeology Branch. A Preliminary Field Reconnaissance does not require a permit if no land or site alteration is involved, however the usefulness of a “non-permit” Preliminary Field Reconnaissance is limited. All other types of field studies do need a heritage permit to collect an adequate level of information.

Forest companies should require all field studies to be completed under a heritage permit, including Preliminary Field Reconnaissance, to ensure that work meets Provincial standards.

Preliminary Field Reconnaissance (PFR)

PFRs are conducted to assess or confirm the potential of proposed operational areas to contain archaeological resources protected under the *Heritage Conservation Act* and recommend more detailed archaeological field studies, where appropriate. A PFR is not a field exercise to locate cultural heritage resources noted in a traditional use study. An acceptable PFR must be conducted by a qualified professional archaeologist to ensure that the potential for an area to contain subtle and/or ancient subsurface resources is recognized. The results of a PFR should be summarized in a brief report.

If your strategy is avoiding archaeological sites identified during a Preliminary Field Reconnaissance, the Province must be confident that all protected archaeological sites within the operational area are identified during the PFR and the boundaries of these sites firmly established. Under these circumstances, archaeological sites identified during a PFR must be recorded and a site form forwarded to the Archaeology Branch. Site recording standards are found in Archaeology Bulletin 19, Minimum Content and Format Requirements for Recording Archaeological Sites.

It is strongly recommended to record sites under a heritage permit allowing the subsurface and CMT testing that will enable archaeologists to establish site boundaries with certainty.

Archaeological Inventories (AI)

An AI is the in-field identification and recording of archaeological sites within a proposed development area. Archaeological Inventories are appropriate if impacts to protected archaeological sites will be avoided during subsequent forestry activities. Archaeological Inventories must be completed under a Heritage Inspection Permit and adhere to the *British Columbia Archaeological Impact Assessment Guidelines*, or in the

case of larger studies, the *British Columbia Archaeological Inventory Guidelines*.

Archaeological Impact Assessments (AIAs)

Impact assessment studies are required where potential conflicts have been identified between archaeological resources and a proposed development. These studies have an inventory component, wherein sites are located and recorded, but AIAs also evaluate the site significance and assess the nature and extent of expected impacts. The AIA results in recommendations to manage the expected site impacts from forestry activities.

Site significance is evaluated through scientific, public, First Nations and economic values.

Management options may include:

- Site avoidance
- Recovering archaeological site information prior to forestry activities (systematic data recovery), or
- Monitoring for additional archaeological site information during forestry activities.

Provincial standards for Archaeological Impact Assessments are published as the *British Columbia Archaeological Impact Assessment Guidelines*.

Archaeological Field Studies – Tips for Foresters

- Require all archaeological field studies to be conducted under a heritage permit, including Preliminary Field Reconnaissance. Requiring a permit for all phases of field work ensures the results are reviewed under the Archaeology Branch quality assurance process and are completed to Provincial standards. (A heritage permit is required for most archaeological field studies in any event.)
- Combining levels of study, such as PFRs and AIAs, increases efficiency and reduces expenses.
- To maintain the heritage values of archaeological sites and reduce costs associated with impact mitigation, design forestry operations to avoid impact to archaeological sites where possible.
- Impacts can be direct, such as land altering or tree harvesting within the archaeological site, or indirect, such as increased erosion or wind throws resulting from forestry activities. Site avoidance includes buffering as a wind firm strategy, where appropriate, to avoid indirect impacts to the sites.
- Heritage inspection permits are held by an archaeologist but [the client must sign that they are aware of, and are in agreement with, the work proposed](#).
- Heritage permit applications are forwarded to the appropriate First Nation(s) (and other applicable parties where appropriate) for comment and to request information concerning archaeological resources within the area.
- Processing a heritage permit application takes approximately 60 days.
- The consulting archaeologists recommendations are subject to review and acceptance by the Archaeology Branch.

Archaeological Impact Management Studies: Heritage Investigation Permits

Introduction

Archaeological impact management (AIM) studies are undertaken when there are unavoidable conflicts between archaeological sites and forestry activities. The nature and extent of these studies are determined in the preceding impact assessment (AIA). There are two common types of AIM studies; site protection and impact mitigation.

Archaeological Site Protection

Archaeological site protection can be achieved through measures that prevent site destruction. Site protection measures include site avoidance, protective covering, stabilization and physical barriers. Site protection measures may require a Site Alteration Permit to implement.

Archaeological Mitigation Studies

These studies focus on reducing the negative impacts of forestry activities on the archaeological site by conducting the scientific recovery, analysis and interpretation of archaeological data. The level of mitigation depends on:

- The significance of the archaeological site
- The nature and extent of the impact
- The relative effectiveness of the mitigative measure
- Research and resource management priorities and needs, and
- Forestry objectives, conditions and constraints

Mitigation studies are conducted under a special heritage *investigation* permit and require the archaeological consultant to submit a detailed proposal as part of the permit application to the Archaeology Branch.

Archaeological Site Impact Management Studies – Tips for Foresters

- Archaeological mitigation studies are relatively rare in a forestry context as most operations have the flexibility to avoid disturbing archaeological resources
- Minor levels of mitigation can be done within the context of an AIA or under a site alteration permit providing they are specified in the permit application
- Processing a heritage permit application takes approximately 60 days.

Development Permitting: Site Alteration Permits

Introduction

Legislation requires that any alteration of a protected site must be conducted under a heritage permit. If proposed forestry operations are likely to impact a protected site, the operator will be required to obtain a Site Alteration Permit.

Site Alteration Permits

The [Site Alteration Permit application](#) is available through the Archaeology Branch website. Applicants must supply information concerning the forestry activities, the need for the alterations and archaeological resource management activities to date as part of the application.

Alteration permits may have additional conditions such as the need for surveillance, monitoring or data recovery that is undertaken with the assistance of a professional archaeologist.

Surveillance/Monitoring

Surveillance and/or monitoring permit conditions may be necessary to ensure that impact mitigation measures are followed (surveillance) or additional archaeological material is identified and recorded during forestry operations (monitoring).

Data Recovery

Occasionally archaeological data can only be recovered during forestry activities and are included as part of a Site Alteration Permit. For example, the collection of datable stem round samples to determine the age of cultural tree modifications may be appropriate during harvesting.

Site Alteration Permits – Tips for Foresters

- A summary report and archaeological site form update are required alteration permit conditions. Failure to submit these documents will mean that the permit holder is ineligible to hold future permits.
- Site Alteration Permit applications are forwarded to the appropriate First Nation(s) (and other affected parties, as appropriate) for comment
- Processing a Site Alteration Permit application usually takes 60 days.
- An archaeological consultant will often prepare a Site Alteration Permit application on the client's behalf.

Accidental Site Damage and Emergency Impact Management

Introduction

Unpermitted damage to archaeological sites may occur despite following the outlined archaeological resource management process. Unpermitted damage includes any damage to a protected archaeological site that is outside the scope of the site alteration permit, unanticipated damage to a site referenced in the permit or unanticipated damage to an unrecorded, protected site.

If an archaeological site is accidentally damaged, you must halt operations in the area and contact the [manager of the Archaeology Branch Permitting and Assessment Section](#) for further direction. Accidental damage is addressed through emergency impact management.

Emergency Impact Management

When forestry operations have inadvertently uncovered protected archaeological sites, one of more of the following actions may be required:

- impact assessment
- site avoidance
- site protection measures
- salvage excavation

[Impact assessments](#), [site avoidance](#) and [site protection measures](#) have been addressed in other sections of the handbook.

Salvage or Emergency Excavation

Salvage excavation is the rapid recovery of archaeological information to recover data which would otherwise be lost. Salvage excavation differs significantly from the systematic data recovery under a heritage inspection permit (which takes place before harvesting or construction begins). Neither strategy is intended to replace the other.

Salvage or Emergency Impact Management – Tips for Foresters

- Salvage or emergency impact management requires a site alteration permit
- The ability to undertake emergency impact measures is often built into an alteration permit to manage unanticipated impacts to intact archaeological deposits
- Processing a site alteration permit application takes approximately 60 days, during which time there must be no further ground disturbing activity in the site area..

Resource Management Qualifications for Archaeologists

Archaeological resource management is a subdiscipline of archaeology. To be effective, an archaeologist requires both methodological expertise in resource management and familiarity with the regional archaeological site types and distribution.

To conduct field studies, the archaeologist must be able to secure a heritage inspection permit. The Province requires that heritage inspection permit applicants meet the following threshold for both education and experience:

- MA degree in archaeology, or anthropology with a specialty in archaeology, or BA degree with an equivalent combination of post-graduate training and experience;
- experience in archaeological resource management (approx. 360 working days) that includes approximately 40 days supervising Archaeological Impact Assessments in the general culture area for which the permit is sought (e.g., Northwest Coast, Interior Plateau, Sub-Arctic/Northern Boreal Forest);
- experience conducting archaeological excavation (approx. 60 working days) that includes approximately 20 days supervising mitigation projects (investigation permits only);
- senior author of an Archaeological Impact Assessment report consistent with the reporting guidelines outlined in Appendix A of the British Columbia Archaeological Impact Assessment Guidelines;
- compliance with all requirements and conditions of previous permits held (if any);
- access to facilities and the services of related specialists required to carry out field work, analysis and report preparation;
- can arrange for the proper curation of recovered cultural materials at a repository that is acceptable to the Archaeology Branch.

Failure to engage a suitably qualified archaeologist for both planning and field studies would mean that the resulting archaeological resource management strategies would, in all likelihood, not meet a test of due diligence.

Approximately 50% of archaeologists specializing in resource management belong to the British Columbia Association of Professional Archaeologists. The association can be contacted through their website at www.bcapca.bc.ca. Membership in the association is not required, therefore there are a number of qualified professional archaeologists who are not association members. These archaeologists may advertise locally or through the internet. The Province does not maintain a list of qualified archaeologists working in British Columbia.

Many First Nation communities have a high level of interest in archaeological resource management as some archaeological sites are directly linked to the heritage and history of the community. Members of the community may be knowledgeable about some site locations and may be trained in archaeology. In some cases, archaeological consulting firms may operate as business adjuncts to the community or an archaeologist may coordinate and provide quality assurance of work completed by trained First Nations field technicians.