

DATE November 2, 2015**REFERENCE No.** 1528756-003-TM-Rev0**TO** Ms. Helen M. Koning, Chief Administrative Officer
District of Oak Bay**FROM** Ben Hjermstad**EMAIL** ben_hjermstad@golder.com**UPLANDS COMBINED SEWER SEPARATION PROJECT: ARCHAEOLOGICAL GUIDELINES**

1.0 INTRODUCTION

At the request of McElhanney Consulting Services Ltd. (McElhanney), Golder Associates Ltd. (Golder) conducted on the behalf of the Corporation of the District of Oak Bay (District of Oak Bay) an archaeological overview assessment (AOA) during predesign for the proposed Uplands Combined Sewer Separation Project, in Oak Bay, British Columbia. The Project Area is located in the Uplands Subdivision within the District of Oak Bay, encompassing approximately 400 homes across 188 ha. The location is currently serviced by a combined sewer system in which the domestic sewage from homes and runoff from roads and impermeable surfaces on the residential lots is conveyed in a single pipe. As a condition of the Capital Regional District's (CRD) Core Area Liquid Waste Management Plan the District of Oak Bay is required to separate the combined sewers in the Uplands Subdivision.

It is anticipated that the Project will take several decades to complete. Work within the District of Oak Bay right-of-way will be conducted in stages. When a new residence is to be constructed, or major renovations to the exiting home are completed, property owners will be required to construct separate services for sanitary sewer and stormwater. Private property owners may be required in the future to hook up to the new sewer system as it becomes available.

This AOA was requested for the predesign phase of the Project to assist in management of archaeological resources that might be situated in the Project Area. The objectives of the AOA were to: 1) identify registered archaeological and historic sites within the Project Area, to the degree possible, using existing records; 2) evaluate the potential for encountering currently undocumented archaeological sites within the Project Area; 3) provide management recommendations to avoid known conflicts between the development and archaeological sites; and 4) assess the need for additional archaeological investigations (e.g., archaeological impact assessment) prior to development. The Project Area is situated in a location where the Archaeology Branch at the Ministry of Forests, Lands and Natural Resource Operations identified the Songhees and Esquimalt Nations as having Aboriginal interests.

The AOA consisted of a review of existing archaeological information, traditional land use information, historical information, and maps relevant to the Project Area. The results of the background review indicate that there are six precontact archaeological sites registered within the Project Area: DcRt-8, DcRt-14, DcRt-20, DcRt-71, DcRt-111 and DcRt-124. These archaeological sites include precontact shell midden, petroforms (i.e., burial cairns), cultural depressions, habitation features, subsistence features, earthwork features, subsurface cultural materials and ancestral remains. In addition, seven registered historic buildings are located within the Project Area: DcRt-123, DcRt-170, DcRt-175, DcRt-188, DcRt-229, DcRt-230, and DcRt-242.



According to the CRD Potential Model, areas with potential to contain undocumented archaeological sites are located within the Project Area, both within the municipal lands and on private property. A preliminary field reconnaissance (PFR) was conducted of public properties in the Project Area to verify and refine the results of the archaeological potential modelling. In addition, it has been demonstrated that the proposed developments can impact archaeological sites and heritage sites that might be located in the Project Area.

Based on the results of this assessment, Golder has recommended that an archaeological impact assessment (AIA) be conducted within the portions of the proposed Project Area that are assessed as having archaeological potential once the location of the proposed rights-of-way has been determined. The intent of the AIA would be to locate and record archaeological sites that may be impacted by proposed development, and to develop site protection or mitigative options for the protection of these archaeological sites.

This technical memorandum is provided in response to The District of Oak Bay's request for a guidance document that describes the District of Oak Bay and local property owners' responsibilities per the provincial *Heritage Conservation Act* (HCA) for the protection of archaeological sites that may be impacted by the proposed Project.

2.0 PROVINCIAL LEGISLATION FOR THE PROTECTION OF ARCHAEOLOGICAL SITES

All archaeological sites, recorded and unrecorded, on Provincial Crown or private land that predate 1846 A.D. are automatically protected under 1996 amendments to the provincial HCA. Certain sites, including human burials and rock art sites, that have historical or archaeological value, are protected regardless of age. Section 36 of the HCA allows for fines and/or imprisonment for impacting an archaeological site. This protection extends to impacts that may result from this proposed Project or other developments.

The Archaeology Branch is responsible for the administration of the HCA. Archaeological site protection under the HCA does not necessarily negate impact from development; in some cases, projects can proceed following an impact assessment or other mitigative actions. A copy of the HCA is located in the *British Columbia Archaeological Impact Assessment Guidelines* (Guidelines) that has been included as an attachment to this memorandum.

2.1 Heritage Conservation Act Permitting

According to the HCA, the District of Oak Bay and property owners' are responsible for the protection of archaeological sites, recorded and unrecorded, within their respective properties. To conduct archaeological investigations to locate or investigate an archaeological site requires a permit issued by the Archaeology Branch.

To secure a permit, a professional archaeologist would need to make an application to the Archaeology Branch. At the conclusion of the archaeological program, a technical report would be prepared in accordance with the Guidelines (Attachment 2), and would include a summary of the archaeological results, as well as maps indicating assessed areas and the estimated boundaries of any archaeological site(s) identified during the Project. The report would be provided to the property owner, and upon review, to the Archaeology Branch and First Nations. Providing a copy of the report to First Nations is a standard industry practice and is consistent with the BC Association of Professional Archaeologists' (BCAPA) Code of Conduct.

There are several different types of permits under the HCA for the management of archaeological sites in BC. Some of these permitting options are discussed below. Property owners are encouraged to engage with the Archaeology Branch and/or an archaeological consultant to determine the most appropriate HCA permit for their needs.

2.1.1 Heritage Inspection Permit

Subsurface investigation of an archaeological site or investigation with the intent to locate a site requires a Heritage Inspection Permit issued to an appropriately qualified professional archaeologist by the Archaeology Branch under Section 14 of the HCA. The property owner responsible for the impact would be a required signatory to this permit. The HCA permit provides professional archaeologists with the ability to conduct archaeological investigations, including AIA's and archaeological monitoring, anywhere in the prescribed boundaries outlined within the permit. The HCA permit will be issued by the Archaeology Branch after a 10 to 12 week review period, which includes a 30 day review period for First Nations identified by the Archaeology Branch as having Aboriginal interests in the Project Area.

There are two types of Heritage Inspection Permits available to developers, a standard Heritage Inspection Permit and a blanket Heritage Inspection Permit.

2.1.1.1 Standard Heritage Inspection Permit

A standard Heritage Inspection Permit would typically be issued to a single proponent such as a municipality or property owner for a single standalone project where there is an expectation that the AIA would be completed within a limited period of time, usually less than 12 months. At the conclusion of the AIA fieldwork, a single standalone Final Report summarizing the results of the assessment would be prepared for the review and approval of the Archaeology Branch.

2.1.1.2 Blanket Heritage Inspection Permit

A blanket Heritage Inspection Permit can be issued to a single proponent for developments occurring within a limited geographic region, such as within a single municipality where there is an expectation that multiple AIAs would be completed over an extended period of time, usually between 1 to 5 years. A blanket Heritage Inspection Permit can also be issued to several proponents, such as multiple municipalities and/or property owners, for a single large scale project, such as the Uplands Combined Sewer Separation Project.

Interim reports would be prepared for the review and approval of the Archaeology Branch at the conclusion of individual field assessments, such as after the completion of an assessment of a lateral pipeline situated within the boundaries of a single property owners' property. At the conclusion of all the AIA fieldwork completed under the blanket Heritage Inspection Permit, a single standalone Final Report summarizing the results of all the assessments conducted under the permit would be prepared for the review and approval of the Archaeology Branch.

2.1.2 Heritage Investigation Permit

Where large scale investigative measures such as archaeological excavation are required to mitigate a significant archaeological site, the Archaeology Branch can require that this work be conducted under a Heritage Investigation Permit issued per Section 14 of the HCA. The proponent would be a required signatory to this permit. Similar to a Heritage Inspection Permit, the application will take approximately 10 to 12 weeks to process and will be forwarded to interested First Nations for their review.

Work conducted under a Heritage Investigation Permit typically requires hand excavation to collect critical information on the nature of the archaeological deposits before they are damaged or destroyed. Similar to a Heritage Inspection Permit, a Final Report would be completed summarizing the results of the fieldwork and analyses.

2.1.3 Alteration Permit

With the exception of impacts occurring under a Section 14 permit, any alteration to a known archaeological site must be permitted under Section 12 of the HCA. A Section 12 Alteration Permit is held by the proponent responsible for the impact and may include data recovery (i.e., archaeological excavation) or other mitigative requirements such as construction monitoring. Similar to a Section 14 *Heritage Conservation Act* Permit, the application will take approximately 10 to 12 weeks for the Archaeology Branch to process and will be forwarded to interested First Nations for their review.

An Alteration Permit is unlikely to be required for an archaeological site discovered during archaeological monitoring conducted under a Heritage Inspection Permit. Similarly, a blanket Heritage Inspection Permit can have allowances for most types of mitigation that might be required under an Alteration Permit, in which case the Archaeology Branch would be unlikely to require an Alteration Permit unless the archaeological assessment and mitigation previously completed were not considered sufficient to fully mitigate the site against impacts from the Project.

3.0 DISTRICT OF OAK BAY: ARCHAEOLOGICAL RESOURCE MANAGEMENT OPTIONS

It has been recommended that District of Oak Bay contract a professional archaeologist to secure a Heritage Inspection Permit to conduct AIA in areas of archaeological potential that may be subject to impacts associated with the Uplands Combined Sewer Separation Project Area. Archaeological fieldwork conducted under this permit would include predevelopment field assessment and archaeological construction monitoring. It has been recommended that pre-development AIA be conducted at the locations of the previously registered archaeological sites and the areas of archaeological potential as identified in the AOA. Where buried soils and sediments with archaeological potential are inaccessible because of pavement and other obstructions, archaeological construction monitoring may be a viable alternative to pre-development AIA.

The scale of the archaeological fieldwork would be dependent upon a number of factors, including the construction methods, length and width of the right-of-way, access (i.e., the right-of-way is located under pavement), and depth of the soils and sediments. For a 25 m long, 2 m wide right-of-way, it is anticipated that one archaeologist and a First Nation assistant could complete the assessment in a single 5 to 8 hour day.

Archaeological monitoring would be dependent upon the schedule of the contractor and the proposed construction techniques. Pipeline installation requiring open trenching can typically be completed in a single day for a 25 m long, 2 m wide right-of-way. An archaeologist and First Nation assistant would need to be on site during any activities that have the potential to impact buried soils and sediments. For locations where a 4 inch (10.16 cm) pipe is bored underground, an archaeologist would be on site in areas of archaeological potential only during the excavation of any open trenches required to facilitate the connection of the lateral from the main sewers to the residence. Trenching would likely be completed in less than a single day.

Using the blanket Heritage Inspection Permit, interim reports will be provided to the Archaeology Branch for their review and approval at the conclusion of each assessment, with a single Heritage Inspection Permit Report completed at the expiry of the Permit that summarizes the results of the entire AIA. Copies of the interim and final reports will also be provided to the District of Oak Bay and First Nations.

3.1 Heritage Inspection Permit

As indicated in Section 2.0, there are two types of Heritage Inspection Permit available to the District of Oak Bay to conduct the recommended AIA. The advantages and disadvantages of the standard and blanket Heritage Inspection Permits are discussed below.

3.1.1 Standard Heritage Inspection Permit

The benefits to the District of Oak Bay for using a standard Heritage Inspection Permit would include the following:

- District can develop a competitive process for selecting a new consultant to complete the recommended AIA work each year; and
- All archaeological work completed each year would be summarized into a single standalone Final Report.

This option would be more costly to the District of Oak Bay as they would be responsible for the costs of preparing a standalone permit application and a standalone Final Report each year.

3.1.2 Blanket Heritage Inspection Permit

The benefits to the District of Oak Bay for using a blanket Heritage Inspection Permit would include the following:

- Preparation of only one Heritage Inspection Permit Application every 3 to 5 years;
- The Heritage Inspection Permit can include Project developments occurring on both District of Oak Bay rights-of-way and private properties;
- Minimizes the need for other HCA permits such as Heritage Investigation Permits and Alteration Permits. Heritage Inspection Permits can include provisions for archaeological mitigation and monitoring normally conducted under a Heritage Investigation Permit or Alteration Permit;
- Results of the archaeological assessment conducted under the Heritage Inspection Permit can be easily used to refine the archaeological potential model developed for this Project, potentially reducing the scope of subsequent AIAs in the Project Area;
- Field work could be completed more efficiently when assessing multiple locations in a limited period of time;
- Interim reports can be completed at the conclusion of each assessment, rather than a large scale Final Report. Results of all the assessments conducted under the permit would need to be summarized into a single Final Report before the expiry of the permit; and
- Administratively, the Archaeology Branch would prefer this permitting option as they would need to review and approve only a single HCA permit approximately every three to five years, and the results of all the assessments conducted during within this time frame of the HCA permit would be summarized into a single Final Report for their review and approval.

For the reasons listed above, a large scale, multi-year project such as the Uplands Combined Sewer Separation Project, the blanket Heritage Inspection Permit would likely realize significant cost savings and scheduling efficiencies for the District of Oak Bay and property owners.

3.2 Chance Find Management

Where there is no registered archaeological site, and the development is situated in an area of low archaeological potential as identified in the AOA, Project works can proceed under a chance find management plan. The Chance Find Management Procedures provide guidance during construction in areas of low archaeological potential. An example of a Chance Find Management Procedure has been appended to this memorandum (Attachment 1).

Low potential does not mean no potential; even the most thorough investigation may not identify all archaeological materials that may be present. Should field observations indicate archaeological deposits are present, Chance Find Management Procedures would provide recommended next steps for the protection of the archaeological site, including engaging an archaeologist to evaluate this information and determine appropriate actions, including AIA. This assessment would be conducted under the District of Oak Bay's Heritage Inspection Permit.

3.3 Heritage Investigation Permit

Where significant archaeological deposits are identified in unavoidable conflict with the development, the Archaeology Branch can require a Heritage Investigation Permit to conduct these investigations. However, it is considered unlikely that a Heritage Investigation Permit will be required for the Uplands Combined Sewer Separation Project because of the limited size of the right-of-way.

The scale of the effort to complete work under a Heritage Investigation Permit cannot be accurately defined until the results of the AIA are available.

3.4 Alteration Permit

The Archaeology Branch can require an Alteration Permit before allowing impacts to a registered archaeological site from the Project. As Project works conducted a blanket Heritage Inspection Permit would have allowances for the investigations associates with an Alteration Permit to be conducted, the Archaeology Branch would be unlikely to require an Alteration Permit unless the archaeological assessment and mitigation previously completed were not considered sufficient to fully mitigate the site against impacts from the Project.

The scale of the effort to complete work under an Alteration Permit cannot be accurately defined until the results of the AIA are available.

4.0 PRIVATE PROPERTY OWNERS: ARCHAEOLOGICAL RESOURCE MANAGEMENT OPTIONS

There are seven registered archaeological sites located in the Uplands Subdivision. The AOA conducted for the Project also identified locations with potential to contain unrecorded archaeological sites protected under the HCA. Per the HCA, property owners are responsible for not damaging or destroying an archaeological site that might be located on their property, including impacts to archaeological sites that might result from construction of a lateral pipeline on their property as part of the proposed Uplands Combined Sewer Separation Project.

Private property owners have several different options available to them for the management of HCA protected archaeological sites on their property from the proposed Uplands Combined Sewer Separation Project. These advantages and disadvantages of these options are discussed below.

4.1 Heritage Inspection Permit

Property owners can contract their own archaeologist to obtain a standalone Heritage Inspection Permit to conduct predevelopment field assessment and archaeological monitoring within their property in areas of archaeological potential. The benefits to a proponent for using a standard Heritage Inspection Permit would include the following:

- Proponent have the flexibility to select their own preferred archaeological consultant to conduct the AIA;
- If a property owner tying into the Uplands Combined Sewer Separation Project is proposing other developments on their property, such as construction of a new residence, the Heritage Inspection Permit could include provisions to conduct AIA of both the lateral and new residence.
- All archaeological work completed on the property would be summarized into a single standalone Final Report.

This option would be more costly to the property owner as they would be responsible for the costs of preparing a standalone permit application, as well as a standalone Final Report at the conclusion of the assessment of their property.

4.2 Blanket Heritage Inspection Permit

As previously discussed, the District of Oak Bay has the option for pursuing a blanket Heritage Inspection Permit issued per Section 14 of the HCA to conduct the recommended AIA within the Project Area. Property owners who tie into the Uplands Combined Sewer Separation Project could be provided the option of opting into this blanket permit by becoming signatories to the permit, or collaborating together in selecting their own archaeological consultant different from the District of Oak Bay to secure a blanket Heritage Inspection Permit. The blanket Heritage Inspection Permit will allow the professional archaeologists selected by the District of Oak Bay or the property owners to proceed with the recommended AIA in areas of archaeological potential, including predevelopment field assessment and archaeological monitoring.

For private property owners who opt into the blanket Heritage Inspection Permit after it has already been issued by the Archaeology Branch, a permit amendment summarizing the proposed Project (i.e., the hook-up) to be assessed under this permit must be provided to the Archaeology Branch and First Nations who have Aboriginal

interests that encompass the Project area. The Archaeology Branch requires 30 days to process each amendment, rather than the 10 to 12 week review period for the original HCA permit application.

For the reasons listed in Section 3.1.2 above, the blanket Heritage Inspection Permit would likely realize significant cost savings and scheduling efficiencies for property owners.

4.3 Risk Management

The Archaeology Branch can only require an AIA where impacts to a registered archaeological site are anticipated from a Project. In locations identified as having archaeological potential, but where there are no archaeological sites registered with the Archaeology Branch, archaeological impact assessment and/or archaeological monitoring conducted under a Heritage Inspection Permit would be recommended to reduce the risk that an archaeological site would be impacted by the development. If archaeological material is discovered in an area of archaeological potential without an AIA being previously conducted under an HCA permit, the property owner would be considered to be in violation of the HCA and may be subject to penalty. Construction work would also be required to stop until such time as an HCA permit could be obtained by a qualified archaeologist to conduct an assessment of the affected cultural deposits; it can take 30 to 84 days to secure this permit during which no development could be conducted within the observed archaeological deposits.

4.4 Chance Find Management

Where there is no registered archaeological site, and the development is situated in an area of low archaeological potential as identified in the AOA, development can proceed under a chance find management plan. The Chance Find Management Procedure provides guidance during construction in areas of low archaeological potential. An example of a Chance Find Management Procedure has been appended to this memorandum.

Low potential does not mean no potential; even the most thorough investigation may not identify all archaeological materials that may be present. Should field observations, consultation with local First Nations or other information sources indicate the potential for archaeological sites to be present, Chance Find Management Procedures would provide recommended next steps for the protection of archaeological deposits, including engaging an archaeologist to evaluate this information and determine appropriate actions, including AIA. For private property owners, this work could be conducted after becoming signatories to a blanket Heritage Inspection Permit for the Uplands Combined Sewer Separation Project.

4.5 Other Potential Heritage Conservation Act Permits

4.5.1 Heritage Investigation Permit

Where significant archaeological deposits are identified in unavoidable conflict with the development, the Archaeology Branch can require a Heritage Investigation Permit to conduct these investigations. However, it is considered unlikely that a Heritage Investigation Permit will be required for the types of work conducted on private property for the Uplands Combined Sewer Separation Project because of the limited size of the right-of-way.

The scale of the archaeological investigations conducted under a Heritage Investigation Permit would be dependent upon the significance of the archaeological deposits and the scale of the proposed impacts.

4.5.2 Alteration Permit

The Archaeology Branch can require an Alteration Permit prior to any development activities that might impact a registered archaeological site. The property owner would be a required signatory to this permit. Where the property owner was a signatory to the blanket Heritage Inspection Permit, the Archaeology Branch would be unlikely to require an Alteration Permit for hookups conducted as part of the Uplands Combined Sewer Separation Project unless the archaeological assessment and mitigation previously completed were not considered sufficient to fully mitigate the site against impacts from the Project. If an Alteration Permit is not required, the property owner would likely realize cost and scheduling benefits associated with the preparation and regulatory review of the permit application.

The scale of the effort to complete work under an Alteration Permit cannot be accurately defined until the results of the AIA are available.

5.0 SCOPE OF WORK

AIA has been recommended at the location of registered archaeological sites and areas of archaeological potential within the Project Area. The objectives of the AIA would include the following: (1) identify, record, and assess archaeological sites located within the Project Area; (2) identify and evaluate possible impacts by the proposed development to these archaeological sites; and (3) recommend appropriate impact management actions.

Per Archaeology Branch Guidelines (Attachment 2), the following steps would be required to complete any recommended archaeological impact assessment.

5.1 Planning and Permitting

- *First Nations Liaison* – Consistent with Archaeology Branch Guidelines, standard industry practice and the bylaws of the BC Association of Professional Archaeologists, the archaeological consultant will notify the Songhees and Esquimalt Nations of the Project, request that they share any archaeological concerns they may be aware of in the Project area, and invite a representative of the community to participate in the field work.
- *Permitting* – The archaeological consultant will obtain the Heritage Inspection Permit required to undertake the AIA. The Heritage Inspection Permit would be issued to a professional archaeologist and would be valid for one year; a blanket Heritage Inspection Permit is valid for three years, and can be extended to five years. Currently, it can take up to 12 weeks to obtain a HCA permit. For new signatories to the permit, a letter amending the permit must be provided to the Archaeology Branch and the First Nations 30 days in advance of the fieldwork.

5.2 Archaeological Impact Assessment

The professional archaeologist and a First Nation representative (s), if available, will carry out required field assessments and/or monitoring to identify, record, and assess archaeological sites, if present, within the Project area. The field assessments and/or monitoring will be customized to the type of development proposed and may include the following components:

- *Surface Inspection* – the Project area will be visually inspected for the presence of surface archaeological materials or evidence of features.
- *Subsurface Testing* – Subsurface tests (e.g., shovel, auger, probes, and/or trowel) may be hand or machine excavated within the Project area. The number of tests required would be dependent upon a number of factors, including the archaeological potential, local terrain, and previous impacts to the Project Area. Evaluative units that measure 50 x 50 cm or 1 x 1 m may also be excavated in the event that archaeological deposits, materials or features are encountered during testing to determine the significance of the archaeological site and mitigate against proposed impacts.
- *Archaeological Monitoring* – Archaeological construction monitoring may be conducted that will include observation of machine excavation of soils and sediments within the Project area. Machinery will be directed to work carefully, stripping off soils in maximum 10 cm deep increments. Machinery operators may be asked to stop the equipment on occasion to allow for closer inspection. All observed artifacts will be collected and a judgemental sample of removed soils will be screened. If undisturbed or otherwise significant remains are encountered then operators may be asked to stop machinery for an unknown period of time to allow for data recovery.
- *Site Recording* – Identified archaeological sites will be photographed and mapped. Site locations will be recorded on base maps and development plans, if available. Artifacts and features will be recorded as to location, type, and material. Hand drawn profiles of one wall from each evaluative unit may be prepared, mapped and/or photographed.
- *Human Remains* – In the event that partial or complete human remains or burial features (e.g., cairns and mounds) are identified in the field, all ground disturbance in the vicinity of the find will cease. Human remains and/or burial features will be protected in place and concerned parties, including the Archaeology Branch, will be immediately informed. Where human remains of suspected forensic interest are encountered, local law enforcement and/or the Coroners Service will be notified. As stipulated in Section 13 of the *Heritage Conservation Act*, the Archaeology Branch will be the responsible authority for the management of non-forensic human remains that are of archaeological or historical value. Archaeological assessment and mitigation of observed human remains will be conducted following standard archaeological site recording procedures, including hand excavation and osteological analysis. First Nations will also be engaged to determine appropriate protocols for the excavation, analysis and reburial of the human remains.

5.3 Reporting

Upon completion of field program; the following tasks will be carried out as necessary:

- *Impact Evaluation* – The archaeological consultant will evaluate possible direct and indirect adverse impacts to identified archaeological sites resulting from proposed development activities.
- *Significance Evaluation* – The archaeological consultant will assess scientific, public, and, where applicable, historic and economic significance for archaeological sites recorded during the AIA that conflict with proposed development activities. The archaeological consultant will use criteria established in the Guidelines to make such assessments. Ethnic significance will be assessed and provided by the First Nation groups with ties to the archaeological site(s) in question. The archaeological consultant will make reasonable attempts to obtain this information.

- *Data Analysis* – Basic artifact and site analyses will be undertaken to satisfy the requirements of the permit. If available, one column sample may be collected during the assessment and the following will be analysed: artifacts, faunal remains and invertebrates.
- *Impact Management Recommendations* – Recommendations for the management of possible impacts to recorded archaeological sites will be made. Recommendations may include avoidance through project re-design, additional archaeological investigations, monitoring, or other mitigative actions.
- *Interim Reporting* – The archaeological consultant will prepare in accordance with the *Guidelines*, an interim report at the conclusion of each field program conducted under a blanket Heritage Inspection Permit. The report will include a summary of the AIA results, as well as maps indicating assessed areas and the estimated boundaries of any archaeological site(s) identified during the AIA. A draft of the AIA report will be provided to the District of Oak Bay, and upon review, to the Archaeology Branch and First Nations. Providing a copy of the report to First Nations is a standard industry practice and is consistent with our Code of Conduct of the BC Association of Professional Archaeologists.
- *Final Reporting* – As required by the HCA permit, one final report will be completed in accordance with Archaeology Branch Guidelines after the permit has expired. The report will include a summary of the results of the archaeological assessments completed under the permit, as well as maps indicating assessed areas and the estimated boundaries of any archaeological site(s) identified during the AIA. Each of the interim reports completed under this permit will be included as an appendix to the final report. BC Archaeological Site Inventory forms will be completed for each revisited or newly recorded site and submitted to the Archaeology Branch for entry into the Provincial Heritage Register. A draft of the AIA report will be provided to the District of Oak Bay, and upon review, to the Archaeology Branch and First Nations.

6.0 ASSUMPTIONS

- The Archaeology Branch will take approximately 10 to 12 weeks to process the HCA permit application. It is assumed that the Archaeology Branch will amend the permit within 30 days of receiving a request.
- The cost estimate provided below includes an allowance for the involvement of one First Nations field assistant. Should the First Nations request a greater level of involvement, or should additional First Nations wish to participate, the archaeological consultant would contact the District of Oak Bay and/or the property owner to discuss potential cost implications and request approval to proceed, prior to commencing any additional work.
- The cost of on-ground utility locates will be borne by the District of Oak Bay or the property owner. Costs related to legal land survey to demarcate known site boundaries, if required, will also be borne by the District of Oak Bay or the property owner. Test holes will be backfilled upon completion; the archaeological consultant would not be responsible for associated property damage including additional landscaping costs.
- Cost estimates provided below include examples where no archaeological sites were identified during the AIA, as well as for an AIA where archaeological deposits were observed requiring detailed artifact and faunal analysis and the preparation of an archaeological site form. If significant cultural deposits are encountered requiring more detailed mitigations, this would be considered a changed condition to the scope, schedule, and cost of the project and the archaeological consultant will contact the District of Oak Bay representative and/or the property owner to discuss the possible implications.

- No provision has been made for the analysis of soil, charcoal and/or faunal/shell samples. No allowance has been made in the budget for the processing of radiocarbon dates. While not expected, if the Archaeology Branch requires the processing of radiocarbon dates, this would be deemed a changed condition to the scope, schedule and cost of the project.
- A wet site is a rare archaeological site type that consists of waterlogged organic cultural materials (e.g., cedar basketry) preserved in an oxygen-free environment in water-saturated soil below the water table. Evaluation of perishable artifacts is complex and conservation measures time consuming. While not expected, the discovery of waterlogged organic cultural materials would be deemed to be a changed condition and work will resume after agreement with the District of Oak Bay or the property owner regarding any changes, if necessary, in the scope, schedule, and cost of the assessment.
- Every archaeological investigation involves a risk of finding human remains. In the event that human remains are encountered during the course of the Project, the archaeological consultant will inform the District of Oak Bay representative and/or the property owner and all site work performed by the archaeological consultant will cease until necessary authorities are notified and approvals to resume work are obtained, if required. The discovery of human remains will be deemed to be a changed condition and work will resume after agreement with the client regarding any changes, if necessary, in the scope, schedule, and cost of the Project. The archaeological consultant will not be responsible for delays nor for additional costs, such as those relating to the discovery, treatment, and repatriation of the remains, and will be paid for such services.

7.0 ESTIMATED ASSESSMENT AND MITIGATION COSTS

7.1 Standalone Heritage Inspection Permit

Archaeological investigations for Projects occurring under the standalone Heritage Inspection Permit would be charged on an actual time and expense basis. The archaeological consultant would provide a workplan, budget and schedule for each project assessment occurring under the permit; work would commence upon receipt of written approval from the property owner. Table 1 provides a cost estimate for conducting an AIA under a standalone Heritage Inspection Permit where no archaeological deposits were identified. Section 7.3 shows the additional costs that would be required to conduct the necessary investigations where an archaeological site was observed during the AIA.

Table 1: Property Owner Generic Budget for Archaeological Impact Assessment for a 25 m Pipeline Right-of-Way Conducted Under a Standalone Heritage Inspection Permit

| Phase | Fees | Expenses ¹ | Subtotal |
|---------------------------------|---------|-----------------------|-----------------|
| Planning and Permitting | \$1,800 | --- | \$1,800 |
| Archaeological Field Assessment | \$1,500 | \$200 | \$1,700 |
| Analysis and Reporting | \$4,400 | --- | \$4,400 |
| Total Estimate | | | \$7,900* |

**Excluding applicable taxes*

¹ Truck rental and fuel.

7.2 Blanket Heritage Inspection Permit

Archaeological investigations for Projects occurring under the blanket Heritage Inspection Permit would be charged on an actual time and expense basis. The archaeological consultant would provide a workplan, budget and schedule for each project assessment occurring under the permit; work would commence upon receipt of written approval from the District of Oak Bay and / or the property owner. Table 2 provides a cost estimate for conducting an AIA under a blanket Heritage Inspection Permit where no archaeological deposits were identified. Section 7.3 shows the additional costs that would be required to conduct the necessary investigations where an archaeological site was observed during the AIA.

Table 2: Property Owner Generic Budget for Archaeological Impact Assessment for a 25 m Pipeline Right-of-Way Conducted Under a Blanket Heritage Inspection Permit

| Phase | Fees | Expenses ¹ | Subtotal |
|---------------------------------|---------|-----------------------|-----------------|
| Planning and Permitting | \$950 | --- | \$950 |
| Archaeological Field Assessment | \$1,500 | \$200 | \$1,700 |
| Analysis and Reporting | \$2,000 | --- | \$2,000 |
| Total Estimate | | | \$4,650* |

**Excluding applicable taxes*

Substantial cost savings can be expected by conducting an AIA under a blanket permit, primarily related to the following efficiencies: preparation of only a single permit application; liaison with the Archaeology Branch and First Nations limited to a single large project rather than stand-alone discussions regarding each of several smaller projects; assessment of multiple properties within a single fieldwork cycle; and abbreviated interim reports replacing the need for multiple large-scale Final Reports.

The above budget includes \$250 for completing the final report required under the HCA permit. No additional fees or disbursements will be requested to conclude this final report. Separate invoices would be provided to the District of Oak Bay and each property owner for each Project conducted under the permit.

7.3 Archaeological Site Assessment

The above budgets in Sections 7.1 and 7.2 make no allowance for documenting an archaeological site or for the cataloguing and analysis of collected archaeological materials. Table 3 provides a cost estimate for conducting these tasks under either a standalone or blanket Heritage Inspection Permit. This budget is based on the assumption that during the assessment no more than one archaeological site is identified and that no more than 50 artifacts and/or faunal remains are collected. It is also assumed that the additional field work would not exceed a single day for one archaeologist and a First Nation field assistant.

Table 3: Property Owner Generic Budget for the Cataloguing and Analysis of up to 50 Artifacts and/or Faunal Remains

| Phase | Fees | Expenses ¹ | Subtotal |
|---------------------------------|---------|-----------------------|-----------------|
| Archaeological Field Assessment | \$1,500 | \$200 | \$1,700 |
| Analysis and Reporting | \$3,000 | --- | \$3,000 |
| Total Estimate | | | \$4,700* |

**Excluding applicable taxes*

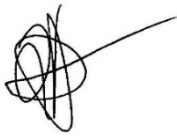
7.4 Archaeological Mitigation

Mitigation conducted under a Heritage Inspection Permit or a Heritage Investigation Permit can be time consuming and expensive, and cannot be accurately defined until the results of the AIA are available. Considering the scale of the anticipated impacts, and based on past experience conducting these forms of investigations, it is reasonable to assume that mitigation costs for a significant archaeological site such as a human burial would likely cost a property owner or the District of Oak Bay, depending upon which land(s) the site is located, between \$20,000 and \$50,000. These costs include provisions for the hand excavation of archaeological deposits and ancestral remains using standard archaeological methods, additional analysis and reporting, as well as additional liaison with the proponent, Archaeology Branch and First Nations. There may be additional costs associated with the reburial of the ancestral remains, including ceremonial activities that might be requested by the First Nations.

8.0 CLOSURE

We trust that the information contained in this technical memorandum is sufficient for your present needs. Should you have any questions regarding the project, please do not hesitate to contact the undersigned.

GOLDER ASSOCIATES LTD.



Ben Hjermstad, M.A.
Associate, Senior Archaeologist

BH/KB/lih



Karen Brady, M.A., RPCA
Associate, Senior Archaeologist

Attachments: Attachment 1 – Guidelines for Archaeological Chance Find Management
Attachment 2 – *British Columbia Archaeological Impact Assessment Guidelines*

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ATTACHMENT 1



November 2, 2015

REPORT



GUIDELINES FOR ARCHAEOLOGICAL CHANCE FIND MANAGEMENT, UPLANDS COMBINED SEWER SEPARATION PROJECT

Submitted to:

McElhanney Consulting Services Ltd.
500, 3960 Quadra Street
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Report No.: 1528756

Distribution:

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Contact Names and Telephone Numbers

APPENDIX B

Basic Archaeological Site Identification Information

APPENDIX C

Archaeology Branch Found Human Remains Policy



1.0 INTRODUCTION

The intent of these Guidelines for Archaeological Chance Find Management is to provide the Corporation of the District of Oak Bay (Oak Bay) personnel and their Contractors working on the Uplands Combined Sewer Separation Project with guidelines for the appropriate response to the discovery of either disturbed or intact archaeological materials, including human remains, during Project activities. The dual objectives of this document are to minimize disruption to Project scheduling while promoting the preservation and proper management of archaeological data. Below are details of the suggested step-by-step response procedure. Contact names and telephone numbers are provided in Appendix I. Basic archaeological site identification criteria are provided in Appendix II, and the Archaeology Branch (Ministry of Forests, Lands and Natural Resource Operations) Policy on Found Human Remains is found in Appendix III.

2.0 GENERAL GUIDELINES FOR ARCHAEOLOGICAL CHANCE FIND MANAGEMENT

Guidelines for archaeological chance find management for intact or disturbed archaeological materials or human remains from any context are presented separately below. The contractor should also be familiar with the Archaeology Branch Policy on Found Human Remains (Appendix III), recognizing that the appropriate course of action may differ depending on whether the remains are found in an undisputed archaeological context (i.e., with artifacts).

2.1 Guidelines for Archaeological Chance Find Management

2.1.1 Initial Response by Contractor

- **Step 1:** If intact or disturbed archaeological deposits are encountered, stop construction in the immediate vicinity of the archaeological site.
- **Step 2:** Contact the Project Archaeologist for further guidance.
- **Step 3:** The Project Archaeologist will advise on further action.

2.1.2 Initial Action

Depending on the nature of the situation, one of the following responses is likely:

- Based on a telephone description of the incident, it may be decided that there are no further concerns, allowing construction to continue as planned.
- A field visit by an archaeologist may be recommended. In this case, Golder will notify and coordinate with the Oak Bay on-site supervisor.



2.1.3 Management Options

In the event that an archaeological site (intact or disturbed) is in fact present, the Project Archaeologist, the Archaeology Branch, Oak Bay personnel and the Contractor should consider the following options when deciding on how to proceed:

- **Option 1:** Avoidance through partial project redesign or relocation. This results in minimal impact to the archaeological site and is the preferred option from a cultural resource management perspective. In certain instances, it can also be the least expensive option from a construction perspective. A site investigation may be required to define archaeological site limits.
- **Option 2:** Salvage or emergency archaeological excavation, if necessary. This option can delay construction by up to several weeks. Consequently, salvage or emergency excavation is not preferred.
- **Option 3:** Application of site protection measures. Archaeological site protection measures include both temporary and long term plans. Temporary strategies could include erecting fencing or barricades to protect the archaeological site; while longer term solutions could include capping the archaeological site area with fill. Appropriate protection measures should be identified on a site-specific basis in consultation with the Archaeology Branch (on Provincial lands) and the Oak Bay Project Manager.

2.2 Emergency Impact Management for Human Remains

2.2.1 Initial Response from Contractor

- **Step 1:** Immediately stop construction in the vicinity of the remains.
- **Step 2:** Contact the local policing authority and the Project Archaeologist for further guidance.
- **Step 3:** The local policing authority and Golder will advise on further action.

2.2.2 Initial Steps

- Golder will notify the Archaeology Branch and the Oak Bay Project Manager.
- Golder or the local policing authority will contact the Office of the Coroner.
- The police and the Project Archaeologist, or a designate who has specialized training in physical anthropology, will visit the site to determine further actions.
- If it is determined that the remains are archaeological in nature, First Nations representatives will be invited to attend, with negotiations to follow to establish an appropriate procedure for handling the remains.

2.2.3 Management Options

An appropriate protocol for handling human remains requires engagement with First Nations. Two possible strategies are suggested below. General consistency with Archaeology Branch guidelines (Appendix III) is recommended.



GUIDELINES FOR ARCHAEOLOGICAL CHANCE FIND MANAGEMENT

- **Option 1:** Avoidance through partial or complete project redesign or relocation. This would protect the remains from further disturbance.
- **Option 2:** Salvage or emergency excavation to respectfully remove the remains for reburial in a location chosen by the First Nations in discussions with Oak Bay.

Oak Bay and the Contractor should be aware that removal of human remains and subsequent reburial might involve certain ceremonies or procedures that could delay construction.

IF THE DISTRICT OF OAK BAY AND THEIR CONTRACTOR HAVE ANY CONCERNS ABOUT ARCHAEOLOGICAL DEPOSITS OR HUMAN REMAINS, THE PROJECT ARCHAEOLOGIST SHOULD BE CONTACTED FOR DIRECTION.

GOLDER ASSOCIATES LTD.

Rob Vincent, B.A.
Archaeologist

Ben Hjermstad, M.A.
Senior Archaeologist / Associate

RV/BH/

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APPENDIX A

Contact Names and Telephone Numbers



CONTACT NAMES AND TELEPHONE NUMBERS

District of Oak Bay Project Manager, Uplands Combined Sewer Separation Project

Dave Marshall

250-598-9108; cell: 250-812-7114

Archaeology Branch Ministry of Forest Lands and Natural Resource Operations

Eric Forgeng

250-953-3362; fax: 250-953-3340

Oak Bay Police Department

Non-emergencies

250-592-2424



APPENDIX B

Basic Archaeological Site Identification Information



BASIC ARCHAEOLOGICAL SITE IDENTIFICATION INFORMATION

Common criteria that may signal the presence of an archaeological or burial site are noted below. The list is not exhaustive, but it includes the most common site indicators that may be encountered within and in the vicinity of the Project area.

Shell Midden

Cultural accumulations of shells, stratified in intricate white and grey layers, mixed with streaks of charcoal, ash, and other debris. Shell middens result from the successive deposition of food remains and general refuse. Shell middens were also commonly used as human burial sites.

Look for: accumulations of layered, crushed, and whole shell possibly mixed with charcoal, black soil, and other food remains (i.e., fish bone) (Photograph 1).



Photograph 1: Shell Midden



Fish Weir

Fish weirs are typically comprised of linear arrangements of wooden stakes interwoven with brush or mats to trap fish on the falling tide. **Look for: short stubs of small diameter branches in linear arrangements in the inter-tidal zone** (Photographs 2 and 3)



Photograph 2: Fish Weir Stake Alignment

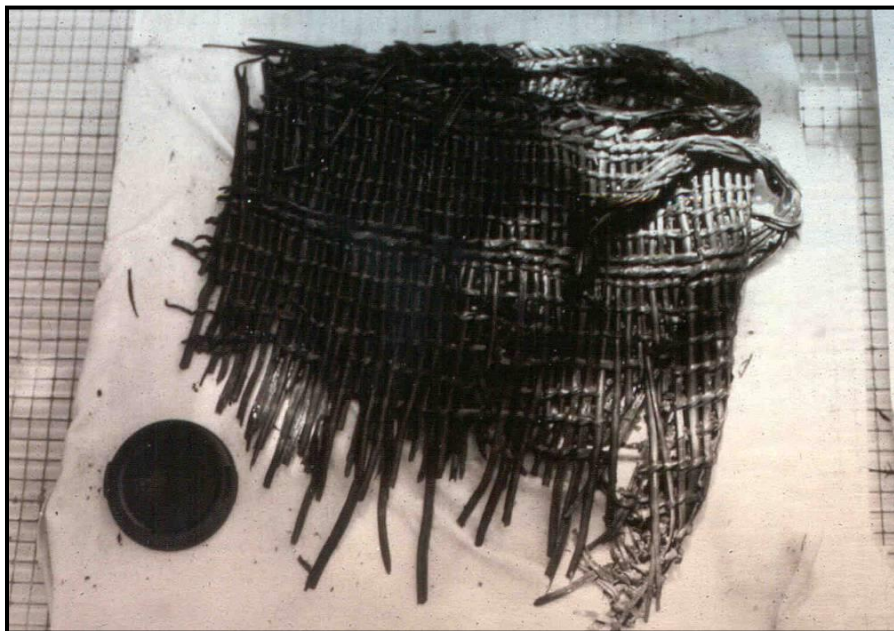


Photograph 3: Fish Weir (Detail)

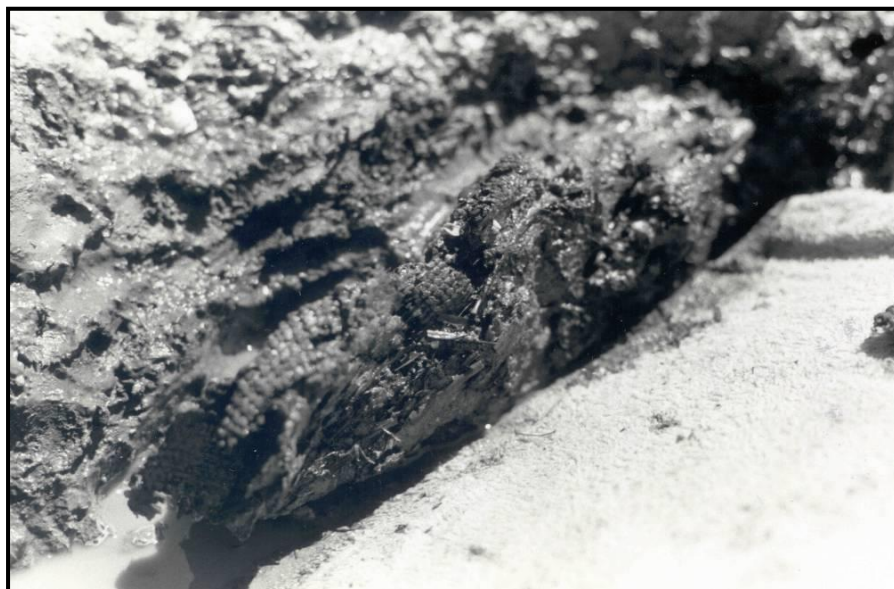


Waterlogged Deposits (Wet Site)

Locations containing organic artifacts (i.e., wood, bark, or plant fibre), that are preserved due to their presence in an anaerobic (oxygen free) environment. **Look for: fragmentary baskets, rope, carved wood implements (e.g., wedges), and similar objects eroding from intertidal silts and/or clay deposits** (Photographs 4 and 5).



Photograph 4: Waterlogged Basket (Cleaned)



Photograph 5: Waterlogged Basket Embedded in Matrix



Artifact or Artifact Scatter

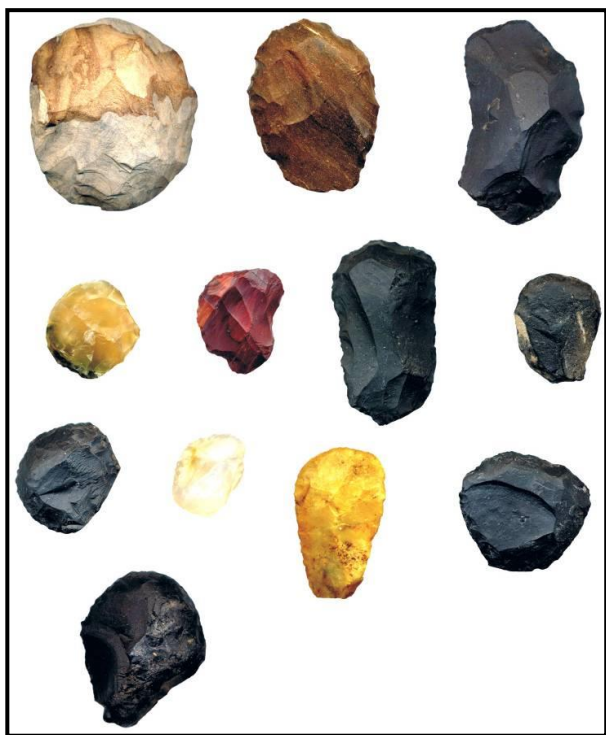
Portable object(s) manufactured or modified by human beings. These items may include chipped or ground stone objects, or implements made from bone and antler (Photographs 6 to 13). **Look for: obviously formed stone objects or pieces of stone that have been chipped and/or ground in a non-natural way. Bone and antler artifacts will exhibit obvious modification (i.e., cutting, shaping, incision, etc.).**



Photograph 6: Chipped Stone Flakes



Photograph 7: Projectile Points



Photograph 8: Formed Scrapers



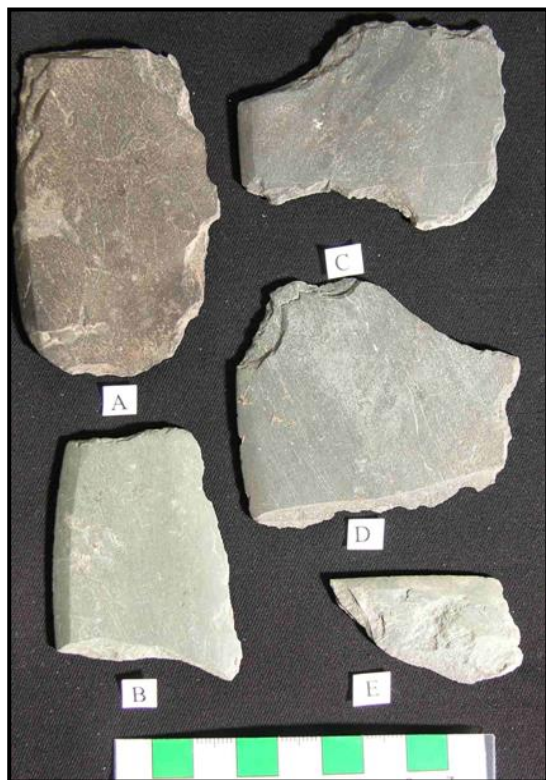
*Photograph 9: Pecked Stone Hand Mauls
(Hammers)*



Photograph 10: Drilled Stone Anchor



Photograph 11: Pecked Stone Bowl Fragments



Photograph 12: Ground Stone Abraders



Photograph 13: Bone and Antler Artifacts



Fire Cracked Rock (FCR)

Heat fractured stone that results from rapid or alternate heating and cooling as in stone boiling or in campfires. FCR is typically associated with resource processing and/or food preparation. **Look for: concentrations of fractured pebbles with signs of being burnt in a fire** (Photograph 14).



Photograph 14: Fire Cracked Rock

Human Remains

Look for: articulated or isolated bones or bone fragments.



APPENDIX C

Archaeology Branch Found Human Remains Policy



Found Human Remains

Issued: September 22, 1999

PURPOSE:

The purpose of this directive on found human remains is to provide guidelines to Archaeology Branch staff, archaeologists, other agencies and the public as to branch procedures for handling human remains that may be protected under the *Heritage Conservation Act* (1996, RSBC, Chap. 187), and to facilitate the respectful treatment of these remains.

MANDATE:

Pursuant to section 13(2)(b) of the *Heritage Conservation Act* (HCA), a permit is required under section 12 or 14 before a person can undertake any actions affecting a burial place of historical or archaeological value, human remains or associated heritage objects.

AUTHORITY:

The Director of the Archaeology Branch and the Manager, Permitting and Assessment Section, have been authorized to exercise the powers of the Minister to issue permits under sections 12(2) and 14(2), as well as ministerial orders under section 14(4) where necessary for emergency conservation purposes.

POLICY STATEMENT:

Upon notification of the discovery of human remains that are not of forensic concern, the Archaeology Branch will take steps to facilitate the respectful handling and disposition of those remains within the limits of existing funds and program priorities.

PROCEDURES:

The following procedures will normally apply in cases where human remains are discovered fortuitously through various land altering activities such as house renovations, road construction or natural erosion; or during archaeological studies conducted under an *HCA* permit:

1.) Fortuitous Discoveries

In cases where the branch has been notified that human remains have been discovered by chance, the following procedures should normally apply:

- the Coroner's Office and local policing authority should be notified as soon as possible;



GUIDELINES FOR ARCHAEOLOGICAL CHANCE FIND MANAGEMENT

- the Coroner's Office should determine whether the matter is of contemporary forensic concern. The branch may provide information and advice that may assist in this determination;
- if the Coroner's Office determines the reported remains are not of forensic concern, the branch will attempt to facilitate disposition of the remains;
- if a cultural affiliation for the remains can be reasonably determined, the branch will attempt to contact an organization representing that cultural group;
- if remains are determined to be of aboriginal ancestry, the branch will attempt to contact the relevant First Nation(s);
- generally, if remains are still interred and are under no immediate threat of further disturbance, they will not be excavated or removed;
- if the remains have been partially or completely removed, the branch will facilitate disposition;
- if removal of the remains is determined to be appropriate, they will be removed under authority of a permit issued pursuant to section 12 or 14, or an order under section 14 of the *HCA*, respecting the expressed wishes of the cultural group(s) represented to the extent this may be known or feasible;
- if circumstances warrant, the branch may arrange for a qualified physical anthropologist or an archaeologist with training in human osteology to provide an assessment of the reported remains in order to implement appropriate conservation measures; and,
- analysis should be limited to basic recording and in-field observations until consultation between the branch and appropriate cultural group(s) has been concluded.

2.) Permitted Archaeological Projects

In cases where human remains are encountered in the course of a permitted project, the Archaeology Branch should be contacted as soon as possible.

- the remains are to be handled in accordance with the methods specified in the permit, respecting the expressed wishes of the cultural group(s) represented, to the extent that these may be known or feasible;
- if the permit does not specify how remains are to be handled and if the cultural affiliation of the remains can be reasonably determined, the field director or permit-holder should attempt to contact an organization representing that group. The permit-holder or field director should advise the branch of the organization contacted, and any wishes expressed by that organization;
- the branch, in consultation with the appropriate cultural group(s), will determine disposition of the remains;
- analysis should be limited to basic recording and in-field observations, until consultation between the branch and appropriate cultural group(s) has been concluded.

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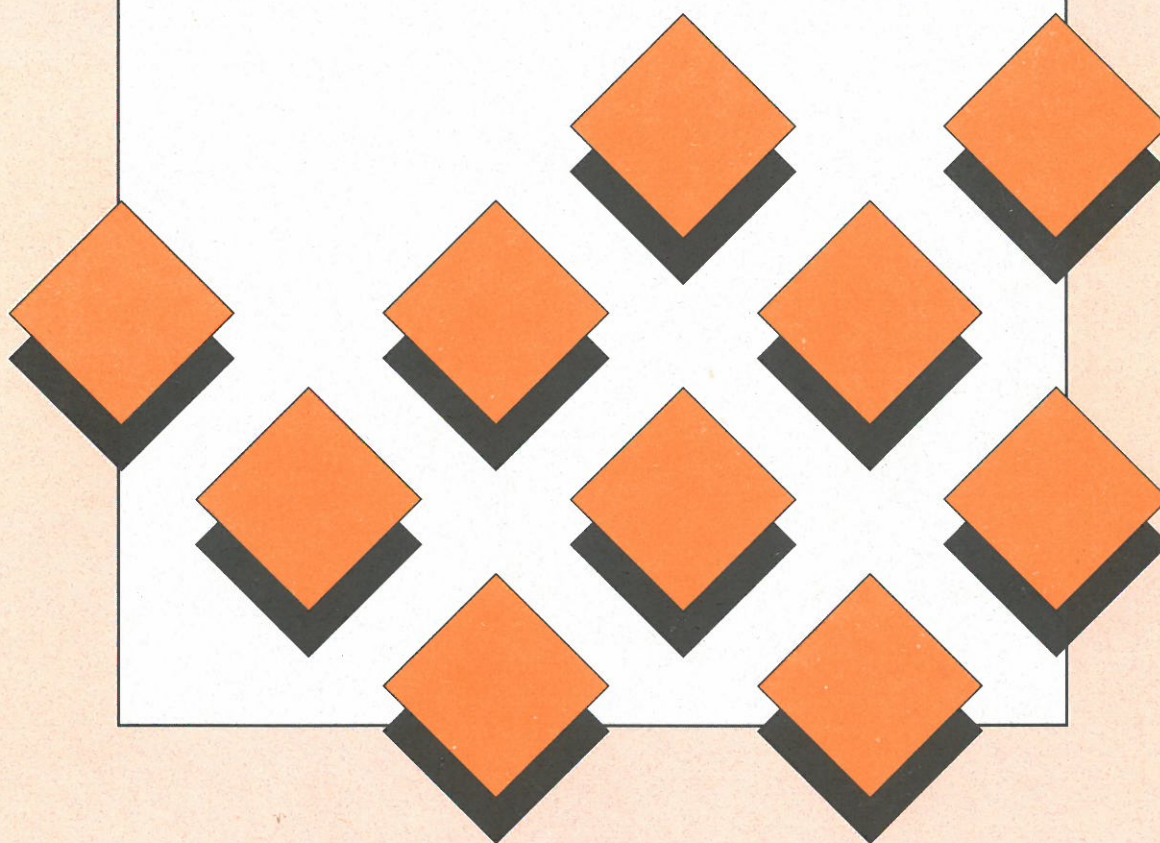
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ATTACHMENT 2

BRITISH COLUMBIA
ARCHAEOLOGICAL
IMPACT ASSESSMENT
GUIDELINES



MINISTRY OF TOURISM, SPORT AND THE ARTS
ARCHAEOLOGY BRANCH

B R I T I S H C O L U M B I A

ARCHAEOLOGICAL
IMPACT ASSESSMENT
GUIDELINES



BRITISH
COLUMBIA

MINISTRY OF TOURISM, SPORT AND THE ARTS
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1.0 INTRODUCTION

This document applies principally to development projects which are reviewable under British Columbia’s *Environmental Assessment Act*. As such, the procedures for archaeological resource assessment and review articulate with the three stage assessment process provided for in that legislation. Although these guidelines apply mainly to development projects which undergo provincial review, they may also be applied, with minor modification, to all other developments.

A particularly important characteristic of these guidelines is their flexibility. They are not intended to be used as a “cookbook” approach to all development projects. Although certain categories of information are needed for decision-making, each archaeological study must be tailored to meet specific project characteristics and needs. It is recognized that the extent of work, particularly in the preliminary stages of project planning, needs to be coordinated with the proponent’s level of commitment to the project.

Therefore, representatives of the Archaeology Branch (hereinafter the Branch) will meet directly with the proponent to provide project-specific clarification and interpretation of the guidelines where necessary. Depending upon the project, considerable flexibility can be expected in the staging of impact assessment and management studies, the level of detail at which the studies are undertaken, and the reporting requirements.

Archaeological assessment and review procedures are under continual review and are subject to change as the Provincial Government’s overall environmental impact assessment and review process evolves. These guidelines have reflected this evolutionary process since their initial appearance as the GUIDELINES FOR HERITAGE RESOURCE IMPACT ASSESSMENT IN BRITISH COLUMBIA published by the Heritage Conservation Branch in 1982.

2.0 LEGISLATION AND ADMINISTRATION

2.1 Legislation

British Columbia's archaeological resources are protected under the *Heritage Conservation Act*.

The provisions of the Act apply whether archaeological sites are located on public or private land. Archaeological sites are protected through designation as "Provincial heritage sites" (section 9), or through automatic protection by virtue of being of particular historic or archaeological value (section 13). Protected archaeological sites may not be altered, i.e. changed in any manner, without a permit issued by the Minister or designate. The Act affords considerable discretionary authority in determining if, and under what conditions, such permits are to be granted (sections 12 and 14).

Section 14 of the Act empowers the Minister to order a "heritage inspection" or a "heritage investigation" where, in the minister's opinion, land contains an archaeological site protected under section 13, or the land may be subject to subdivision, alienation from government ownership, or alteration by natural or human causes. The purpose of a heritage inspection is to assess the archaeological significance of land or other property. In this regard, the inspection determines the presence of archaeological sites which warrant protection, or are already protected, under the Act. A heritage investigation is undertaken in order to recover information which might otherwise be lost as a result of site alteration or destruction.

2.2 Administration

Sections of the *Heritage Conservation Act* pertaining to archaeological resources are administered by the Branch. The role of the Branch is not to prohibit or impede land use and development, but rather to assist the Provincial Government in making decisions which will ensure optimal land use. When the benefits of a project are sufficient to outweigh the benefits of archaeological preservation, the Branch's primary concern is to work with the proponent in determining how the project may be implemented with minimal loss to archaeological resource values. If appropriate impact management practices are adopted, it is usually possible to minimize the loss of archaeological resource values in a cost-effective manner. Where the loss of significant archaeological values cannot be adequately mitigated, the role of the Branch is to ensure that appropriate compensatory measures are implemented.

The following objectives reflect archaeological resource management policy in British Columbia:

- (a) to preserve representative samples of the province's archaeological resources for the scientific and educational benefit of present and future generations;
- (b) to ensure that development proponents consider archaeological resource values and concerns in the course of project planning; and
- (c) to ensure where decisions are made to develop land, the proponents adopt one of the following actions:
 - (i) avoid archaeological sites wherever possible;
 - (ii) implement measures which will mitigate project impacts on archaeological sites; or
 - (iii) compensate British Columbians for unavoidable losses of significant archaeological value.

In managing archaeological resources, the Branch endeavors to develop a cooperative relationship with project proponents.

3.0 ARCHAEOLOGICAL IMPACT ASSESSMENT AND REVIEW PROCESS

3.1 Introduction

Archaeological impact assessment studies are initiated in response to development proposals which will potentially disturb or alter the landscape, thereby endangering archaeological sites. Major development projects of this nature normally proceed through four general stages of project planning: (1) prospectus; (2) feasibility or preliminary planning and design; (3) final design, licencing and approval; and (4) implementation and operation. At each stage of this general planning process a particular type of archaeological study is undertaken to meet specific project objectives and needs.

The archaeological assessment process is composed of two principal components: **assessment** and **impact** management. Assessment is primarily concerned with the inventory and evaluation of archaeological resources, and the assessment of impacts during the initial stages of project planning. Impact management follows directly from assessment and is primarily concerned with managing unavoidable adverse impacts as well as unanticipated impacts. It is important to recognize that the assessment and impact management stages are approached sequentially in association with specific levels of project planning. Moreover, each new stage in the process is highly dependent upon results and recommendations made in the preceding stage. The success of this process is also dependent upon effective communication and cooperation between project proponents and the Branch, and their mutual respect for development and archaeological resource management objectives.

3.2 Roles and Responsibilities

The main participants in the archaeological assessment process usually include: project proponents, archaeological consultants, Branch staff, and project committees established under the *Environmental Assessment Act*.

3.2.1 Project Proponents and Consultants

Proponents are encouraged to consider archaeological resource concerns in their project planning and design from the outset. As participants in the archaeological assessment process, proponents and archaeological consultants who represent them, are responsible for:

- (a) complying with all orders and permits issued under the *Heritage Conservation Act*;
- (b) implementing assessment and impact management studies; and
- (c) reporting the results and recommendations of archaeological impact studies to the Branch for review.

Consultants should be concerned with designing research strategies, conducting archaeological impact assessment and management studies, and recommending courses of action. The responsibility for final decisions concerning the management of archaeological resources is vested with the Branch.

3.2.2 Archaeology Branch

The branch exercises various responsibilities that include:

- (a) establishing impact assessment and management guidelines, study standards, and reporting requirements;
- (b) reviewing development proposals to determine the proponent's level of involvement in the archaeological resource assessment process;
- (c) preparation of orders and permits pursuant to the *Heritage Conservation Act* in assistance to the Minister;
- (d) providing guidance or direction to the proponent throughout the archaeological assessment process;

- (e) ensuring that First Nations who could be affected by decisions are given an opportunity to have their concerns considered prior to making decisions;
- (f) providing consultants with access to archaeological site files, maps, and other documentary materials maintained within the Ministry;
- (g) monitoring field aspects of archaeological impact assessment and management studies for compliance with terms and conditions of orders and permits;
- (h) reviewing reports and research proposals for relevance, completeness and objectivity; and
- (i) establishing terms and conditions for project approval.

3.2.3 Project Committees

Committees set up for each project review incorporate the archaeological resource assessment process by providing general direction and coordination of the province's overall environmental assessment and review process. These committees work directly with the proponent and the Branch to clarify requirements or provide general advice on assessment and review procedures at various stages in the approval process. They also coordinate review comments, advice and queries the Branch may have regarding a proponent's archaeological impact studies.

3.3 Review Procedures

The Branch may conduct as many as three formal reviews. The first involves an examination of the proponent's application for a Project Approval Certificate to determine whether further involvement in the archaeological resource assessment process is required. Therefore, the application should include an archaeological overview. The second review is to evaluate the Project Report which should include the results of an archaeological impact assessment. The third review is to assist in the preparation of the terms of reference for an Environmental Assessment Board hearing, if required, and will address archaeological impact management issues.

The Branch may request that report deficiencies either be rectified immediately or, depending on the nature of these deficiencies, in a following stage of the assessment process. In this regard, the Branch will advise the proponent of the nature of deficiencies and how they may be rectified.

Archaeological assessment reports should be received by the Branch as early as possible in the project planning process. Early Branch review will provide maximum lead time for correcting report deficiencies and/or designing and implementing subsequent archaeological investigations. This practice will minimize expense and delay to the proponent.

Unless the proponent requests otherwise, final reports received by the Branch are considered public information.

3.4 Overview

The archaeological resource overview is intended to identify and assess archaeological resource potential or sensitivity within a proposed study area. Recommendations concerning the appropriate methodology and scope of work for subsequent inventory and/or impact assessment studies are also expected.

Typical overview studies should entail (see Appendix A):

- (a) a background library and records search of ethnographic, archaeological and historical documents pertinent to the study area;
- (b) a statement of archaeological resource potential and distribution in the study area;
- (c) a preliminary assessment of anticipated impacts in light of proposed development plans; and
- (d) recommendations concerning the need for further archaeological impact assessment studies.

These studies are of fundamental importance in assessing the archaeological resource potential of a study area, and should result in predictions regarding archaeological site variability, density and distribution. In addition, it may also be possible to develop a preliminary evaluatory framework within which to judge the significance of archaeological sites. Depending on the availability and quality of existing data, it may be possible to achieve these research objectives without undertaking field survey; however, documentary research and, where practical, direct consultation with knowledgeable persons and organizations is essential.

Overview studies are particularly important with respect to large-scale development projects such as hydro-electric dams, electrical transmission lines, pipelines, etc. More site specific projects involving small, well-defined localities such as residential subdivisions, manufacturing plants, and port facilities may effectively combine an overview and impact assessment study. However, the most appropriate type of study to be undertaken at this stage should be established through consultation with the Branch.

3.4.1 Documentary Research

This aspect of the overview study should involve a thorough review of library and archival literature as well as other relevant data sources. The research should include, but need not be limited to:

- (a) a check of extant records including the B.C. Archaeological Site Inventory, legal land survey records, and other pertinent records and inventory files;
- (b) a review of all previous archaeological investigations in the study area or in immediately adjacent areas;
- (c) a review of relevant information from published and unpublished sources such as local and regional history, pre-history and ethnography;
- (d) a review of relevant paleoecological studies to assess past environmental conditions that may have influenced cultural adaptations; and
- (e) examination and interpretation of air photographs and geomorphological and pedological information as an aid for assessing the potential for human habitation.

Occasionally, access to relevant unpublished data may be seriously hindered. For example, some institutions or organizations that maintain archaeological documents, records, files, etc. may have, except under special arrangement, a confidential policy regarding use of the material. Such a policy usually reflects legitimate concerns about the integrity of the documents. In other cases, the researcher may face a long waiting period before access to the data is permitted. Problems in accessing pertinent and necessary documentary sources should be ascertained as early as possible, and those problems which cannot be immediately resolved should be brought to the attention of the Branch.

3.4.2 Direct Consultation

Individuals and organizations with knowledge of archaeological resources in the study area should be contacted where appropriate. The objective is to compile information concerning the location, distribution and significance of reported archaeological sites. Interviews should be designed to elicit information which may facilitate reconstructing or confirming ethnographic and historic patterns of settlement, land use and subsistence. Among those who should be consulted are aboriginal groups, local museums, archaeological or historical societies, longtime residents, and specialists having local or regional expertise in the area. Specialists may include archaeologists, historians and ethnohistorians, among others.

Local perceptions and attitudes may have a significant bearing on resource management decision-making, and therefore should be reported. This is especially true when there is strong local interest and concern regarding the safety of a particular archaeological site or a group of such sites. Interviews with various persons can provide the researcher with an opportunity to document public or community attitudes toward impacts which a proposed development may have on local archaeological resources. However, particularly in the early project planning phases where speculation may be a concern, these interviews must be conducted only with the approval of the proponent, and must be handled very objectively.

3.4.3 Preliminary Field Reconnaissance

The archaeological overview may require a preliminary field reconnaissance, which may involve a simple overflight of the study area or, if greater intensity is demanded, a field survey using either systematic or judgemental site sampling techniques. Reconnaissance survey should be undertaken in the event that historical, archaeological, ethnological, or other documentary sources necessary for assessing the archaeological resource potential of the study area are insufficient or unavailable. A field reconnaissance is also warranted in the case where many alternatives are under consideration for the location of

project facilities. In this case, an overview of the resource potential of an area, based entirely on documentary research, may be inadequate for providing effective guidance in project planning. The Branch will provide assistance in determining the need and appropriate intensity of preliminary field reconnaissance for specific development projects.

The reconnaissance survey should be designed to assess the archaeological resource potential of the study area, and to identify the need and appropriate scope of further field studies. Although this may involve some ground reconnaissance, areal coverage will usually be quite small relative to the overall size of the study area. This preliminary survey will seldom provide sufficient data to ensure an adequate estimate of all archaeological sites in an area. However, information resulting from preliminary field reconnaissance should:

- (a) confirm or refute the existence of archaeological sites reported or predicted from documentary research;
- (b) allow further predictions to be made about the distribution, density and potential significance of archaeological sites within the study area;
- (c) identify areas where sites are apparently absent, implying low or no potential;
- (d) verify, wherever possible, potential impacts imposed by the development project;
- (e) suggest the most appropriate survey methods or techniques to be used in an intensive field survey should such a survey be necessary.

By accomplishing these research objectives, the reconnaissance survey serves as a useful preliminary study for designing and subsequently implementing a more intensive site survey.

Techniques employed in reconnaissance survey will vary depending on such factors as terrain, vegetation, land use, ease of access, urbanization, the size of the project area, and the types of archaeological resources being sought. Where archaeological sites are anticipated, it may be necessary to undertake some subsurface testing to locate sites lacking surface evidence, to delineate site boundaries or, where necessary, to obtain sufficient information for preliminary site evaluation.

In undertaking an archaeological overview the development proponent, or his consultant, is encouraged to develop innovative approaches to predicting or evaluating overall resource sensitivity or potential within the study area. In this respect, it is important to consult all relevant data sources. Furthermore, the services of specialists such as ethnohistorians and geologists should be drawn upon so as to make the fullest use of the data. A comprehensive overview will ultimately result in more efficient and cost-effective research in later stages of the assessment process.

3.5 Impact Assessment

An archaeological impact assessment will be required where potential impacts to archaeological resources are identified in the overview study. The impact assessment is designed to gain the fullest possible understanding of archaeological resources which would be affected by the project.

The primary objectives of the impact assessment are to:

- (a) identify and evaluate archaeological resources within the project area;
- (b) identify and assess all impacts on archaeological resources which might result from the project; and
- (c) recommend viable alternatives for managing unavoidable adverse impacts including a preliminary program for;
 - (i) implementing and scheduling impact management actions and, where necessary,
 - (ii) conducting surveillance and/or monitoring

Information provided by the impact assessment is intended to assist the proponent in choosing a suitable approach to designing, planning and implementing the proposed project while giving consideration to archaeological resources. In the course of fulfilling these basic objectives, it is often possible to conduct problem-oriented research aimed at enhancing scientific knowledge and public appreciation of British Columbia's archaeological resources. The effective integration of management and research is a desirable quality of impact assessment studies and should be recognized as an integral part of such studies.

Two basic research activities are associated with the impact assessment level of study: (1) inventory, and (2) impact identification and assessment. Due to uncertainty as to the number or types of archaeological sites which might be encountered during the inventory stage, it is often preferable to separate that stage from the impact identification and assessment stage.

3.5.1 Inventory

Inventory studies involve the in-field survey and recording of archaeological resources within a proposed development area. The nature and scope of this type of study is defined primarily by the results of the overview study. In the case of site-specific developments, direct implementation of an inventory study may preclude the need for an overview.

There are a number of different methodological approaches to conducting inventory studies. Therefore, the proponent, in collaboration with an archaeological consultant, must develop an inventory plan for review and approval by the Branch prior to implementation.

3.5.1.1 Site Surveying

Site surveying is the process by which archaeological sites are located and identified on the ground. Archaeological site surveys often involve both surface inspection and subsurface testing.

A systematic surface inspection involves a foot traverse along pre-defined linear transects which are spaced at systematic intervals across the survey area. This approach is designed to achieve representative areal coverage. Alternatively, an archaeological site survey may involve a non-systematic or random walk across the survey area. Subsurface testing is an integral part of archaeological site survey. The purpose of subsurface testing, commonly called "shovel testing", is to:

- (a) assist in the location of archaeological sites which are buried or obscured from the surveyor's view, and
- (b) help determine the horizontal and vertical dimensions and internal structure of a site.

In this respect, subsurface testing should not be confused with evaluative testing (section 3.5.2.1), which is a considerably more intensive method of assessing site significance.

Once a site is located, subsurface testing is conducted to record horizontal extent, depth of the cultural matrix, and degree of internal stratification. Because subsurface testing, like any form of site excavation, is destructive it should be conducted only when necessary and in moderation.

Subsurface testing is usually accomplished by shovel, although augers and core samplers are also used where conditions are suitable. Shovel test units averaging 40 cm² are generally appropriate, and are excavated to a sterile stratum (i.e. C Horizon, glacial till, etc.). Depending on the site survey strategy, subsurface testing is conducted systematically or randomly across the survey area. Other considerations such as test unit location, frequency, depth and interval spacing will also depend on the survey design as well as various biophysical factors. All test units placed on a site must be accurately recorded and mapped.

3.5.1.2 Survey Sampling

Site survey involves the complete or partial inspection of a proposed project area for the purpose of locating archaeological sites. Since there are many possible approaches to field survey, it is important to consider the biophysical conditions and archaeological site potential of the survey area in designing the survey strategy.

Ideally, the archaeological site inventory should be based on intensive survey of every portion of the impact area, as maximum areal coverage will provide the most comprehensive understanding of archaeological resource density and distribution. However, in many cases the size of the project area may render a complete survey impractical because of time and cost considerations.

In some situations it may be practical to intensively survey only a sample of the entire project area. Sample selection is approached systematically, based on accepted statistical sampling procedures, or judgementally, relying primarily on subjective criteria.

3.5.1.3 Systematic Survey Sampling

A systematic sample survey is designed to locate a representative sample of archaeological resources within the project area. A statistically valid sample will allow predictions to be made regarding total resource density, distribution and variability. In systematic sample surveys it may be necessary to exempt certain areas from intensive inspection owing to excessive slope, water bodies, landslides, land ownership, land use or other factors. These areas must be explicitly defined. Areas characterized by an absence of road access or dense vegetation should not be exempted.

The proponent is encouraged to seek professional consultation to ensure that the sampling methods selected for archaeological site survey are both appropriate and accurately applied. In this regard, survey sampling methods applied under similar environmental and project conditions should be consulted.

3.5.1.4 Judgemental Survey Sampling

Under certain circumstances, it is appropriate to survey a sample of the project area based entirely on professional judgement regarding the location of sites. Only those areas which can reasonably be expected to contain archaeological sites are surveyed.

However, a sufficient understanding of the cultural and biophysical factors which influenced or accounted for the distribution of these sites over the landscape is essential. Careful consideration must be given to ethnographic patterns of settlement, land use and resource exploitation; the kinds and distribution of aboriginal food sources; and restrictions on site location imposed by physical terrain, climatic regimes, soil chemistry or other factors. A judgemental sample survey is not desirable if statistically valid estimates of total archaeological resource density and variability are required.

3.5.1.5 Site Recording

Site survey includes the complete documentation of each identified site. All archaeological sites in British Columbia are recorded on standard site inventory forms available from the Branch.

The *Archaeological Site Inventory Form Guide* must be consulted when recording archaeological sites. This manual identifies the kinds of information to record and the procedures to follow in completing site inventory forms. Site forms should include a description of site characteristics, along with a map of the site drawn to scale. The map should illustrate the arrangement of site features, as well as the location of the site relative to the nearest recognizable and permanent landmark. Since these sites are often situated in remote areas, the map must be drawn in sufficient detail to allow easy relocation in the field. Legal descriptions should be provided wherever possible.

Site recording should also include a thorough description of all observed cultural materials. It is recommended that a representative selection of diagnostic artifacts or features be drawn to scale or photographed *in situ*. Drawings and photographs should be included with the inventory form.

Once completed, site inventory forms must be forwarded to the Branch. The Branch will assign a "Borden" identification number to each site and subsequently notify the proponent and/or his archaeological consultant as to which numbers have been assigned. Since Borden numbers can only be assigned by Branch staff, temporary site numbers must be used in the field.

3.5.2 Assessment

Impact assessment studies are only required where conflicts have been identified between archaeological resources and a proposed development. These studies require an evaluation of the archaeological resource to be impacted, as well as an assessment of project impacts. The purpose of the assessment is to provide recommendations as to the most appropriate manner in which the resource may be managed in light of the identified impacts. Management options may include alteration of proposed development plans to avoid resource impact, mitigative studies directed at retrieving resource values prior to impact, or compensation for the unavoidable loss of resource values.

There are several methodological approaches that can be utilized in conducting an impact assessment. Therefore, the proponent's archaeological consultant must develop an impact assessment proposal for review and approval by the Branch prior to implementation.

It is especially important to utilize specialists at this stage of assessment. The evaluation of any archaeological resource should be performed by professionally qualified individuals. The involvement of researchers with varied expertise throughout this stage will help ensure that potentially significant data are not inadvertently overlooked.

3.5.2.1 Site Evaluation

Techniques utilized in evaluating the significance of an archaeological site include systematic surface collecting and evaluative testing. Systematic surface collection is employed wherever archaeological remains are evident on the ground surface. However, where these sites contain buried deposits, some degree of evaluative testing is also required. Surface collecting involves:

- (a) placing an appropriate grid over the site area or some portion thereof;
- (b) mapping, measuring, and recording all cultural items and other relevant materials observed within the grid system; and
- (c) collecting and cataloguing recorded materials.

Systematic surface collection from archaeological sites should be limited, insofar as possible, to a representative sample of materials. Unless a site is exceptionally small and limited to the surface, no attempt should be made at this stage to collect all or even a major portion of the materials. Intensive surface collecting should be reserved for full scale data recovery if mitigative studies are required. Site significance is determined following an analysis of the surface collected and/or excavated materials.

Evaluative testing or "test excavation" is appropriate at archaeological sites containing buried cultural materials. Evaluative testing implies "controlled" excavation of a portion of such sites using established data recovery techniques. The objective is to gain a sufficient impression of the content and structure of a site so that a reliable evaluation of significance can be made. Evaluative testing will also provide necessary information for estimating the cost of full-scale excavation should this activity be necessary.

Evaluative testing involves:

- (a) systematic excavation of one or more units by stratigraphic or arbitrary levels;
- (b) mapping, measuring, and recording the horizontal and vertical provenience of all cultural items or other relevant materials observed within each excavation unit; and
- (c) recovery and cataloguing of all cultural materials.

Profile drawings of the stratigraphy and features exposed in the walls of excavation units should also be prepared where appropriate. Site significance is based on the subsequent analysis and interpretation of recovered materials and the context in which they were found.

Evaluative testing should not be interpreted as a full-scale data recovery or mitigation operation since it is not intended to alleviate adverse impacts or resolve conflicts with a proposed project. The appropriate number of units to excavate for evaluative purposes will vary according to site characteristics such as horizontal and vertical extent, artifact density, and structural complexity. In some cases, a single excavation unit will be appropriate. In others, several units systematically or judgementally placed across the site area will be required. Natural and artificial exposures, such as stream cut-banks and vehicle trails, should be used where possible to supplement data from excavation units.

3.5.2.2 Significance Criteria

There are several kinds of significance, including scientific, public, ethnic, historic and economic, that need to be taken into account when evaluating archaeological resources. For any site, explicit criteria are used to measure these values. Checklists of criteria for evaluating pre-contact and post-contact archaeological sites are provided in Appendix D and E. These checklists are not intended to be exhaustive or inflexible, and the user should add to and revise them as necessary. Innovative approaches to site evaluation which emphasize quantitative analysis and objectivity are encouraged. The process used to derive a measure of relative site significance must be rigorously documented, particularly the system for ranking or weighting various evaluatory criteria.

Site integrity, or the degree to which an archaeological site has been impaired or disturbed as a result of past land alteration, is an important consideration in evaluating site significance. In this regard, it is important to recognize that although an archaeological site has been disturbed, it may still contain important scientific information.

Archaeological resources may be of scientific value in two respects. The potential to yield information which, if properly recovered, will enhance understanding of British Columbia's human history is one appropriate measure of scientific significance. In this respect, archaeological sites should be evaluated in terms of their potential to resolve current archaeological research problems. Scientific significance also refers to the potential for relevant contributions to other academic disciplines or to industry.

Public significance refers to the potential a site has for enhancing the public's understanding and appreciation of the past. The interpretive, educational and recreational potential of a site are valid indications of public value. Public significance criteria such as ease of access, land ownership, or scenic setting are often external to the site itself. The relevance of archaeological resource data to private industry may also be interpreted as a particular kind of public significance.

Ethnic significance applies to archaeological sites which have value to an ethnically distinct community or group of people. Determining the ethnic significance of an archaeological site may require consultation with persons having special knowledge of a particular site. It is essential that ethnic significance be assessed by someone properly trained in obtaining and evaluating such data (i.e. ethnologists, behavioral scientists, etc.).

Historic archaeological sites may relate to individuals or events that made an important, lasting contribution to the development of a particular locality or the province. Historically important sites also reflect or commemorate the historic socioeconomic character of an area. Sites having high historical value will also usually have high public value.

The economic or monetary value of an archaeological site, where calculable, is also an important indication of significance. In some cases, it may be possible to project monetary benefits derived from the public's use of an archaeological site as an educational or recreational facility. This may be accomplished by employing established economic evaluation methods; most of which have been developed for valuating outdoor recreation. The objective is to determine the willingness of users, including local residents and tourists, to pay for the experiences or services the site provides even though no payment is presently being made. Calculation of user benefits will normally require some study of the visitor population.

3.5.2.3 Assessing Impacts

An archaeological resource impact may be broadly defined as the net change between the integrity of an archaeological site with and without the proposed development. This change may be either beneficial or adverse.

Beneficial impacts occur wherever a proposed development actively protects, preserves or enhances an archaeological resource. For example, development may have a beneficial effect by preventing or lessening natural site erosion. Similarly, an action may serve to preserve a site for future investigation by covering it with a protective layer of fill. In other cases, the public or economic significance of an archaeological site may be enhanced by actions which facilitate non-destructive public use. Although beneficial impacts are unlikely to occur frequently, they should be included in the assessment.

More commonly, the effects of a project on archaeological sites are of an adverse nature. Adverse impacts occur under conditions that include:

- (a) destruction or alteration of all or part of an archaeological site;
- (b) isolation of a site from its natural setting; and
- (c) introduction of physical, chemical or visual elements that are out-of-character with the archaeological resource and its setting.

Adverse effects can be more specifically defined as direct or indirect impacts. Direct impacts are the immediately demonstrable effects of a project which can be attributed to particular land modifying actions. They are directly caused by a project or its ancillary facilities and occur at the same time and place. The immediate consequences of a project action, such as slope failure following reservoir inundation, are also considered direct impacts.

Indirect impacts result from activities other than actual project actions. Nevertheless, they are clearly induced by a project and would not occur without it. For example, project development may induce changes in land use or population density, such as increased urban and recreational development, which may indirectly impact upon archaeological sites. Increased vandalism of archaeological sites, resulting from improved or newly introduced access, is also considered an indirect impact. Indirect impacts are much more difficult to assess and quantify than impacts of a direct nature.

Once all project related impacts are identified, it is necessary to determine their individual level-of-effect on archaeological resources. This assessment is aimed at determining the extent or degree to which future opportunities for scientific research, preservation, or public appreciation are foreclosed or otherwise adversely affected by a proposed action. Therefore, the assessment provides a reasonable indication of the relative significance or importance of a particular impact. Normally, the assessment should follow site evaluation since it is important to know what archaeological values may be adversely affected.

The assessment should include careful consideration of the following level-of-effect indicators, which are defined in

Appendix F:

- magnitude
- severity
- duration
- range
- frequency
- diversity
- cumulative effect
- rate of change

The level-of-effect assessment should be conducted and reported in a quantitative and objective fashion. The methodological approach, particularly the system of ranking level-of-effect indicators, must be rigorously documented and recommendations should be made with respect to managing uncertainties in the assessment.

3.6 Impact Management

The management of unavoidable and unanticipated adverse impacts on archaeological resources is achieved through the implementation of mitigation, compensation, surveillance, monitoring and emergency impact management measures. These measures are only implemented in situations where unavoidable conflicts are identified between archaeological resources and a proposed development. The nature and extent of these measures will have been determined in the impact assessment stage.

In practice, defining the optimum level of impact management is hindered by the fact that archaeological resource values and preservation benefits are not easily measured in economic terms. Determining publicly and professionally acceptable levels will usually necessitate discussion with the Branch. The overriding objectives are to promote efficiency and equity, and ensure that the benefits of such measures exceed the costs.

3.6.1 Mitigation

Mitigation refers to measures that reduce the deleterious effects of project construction, operation and maintenance on archaeological resource values. Actions designed to prevent or avoid adverse impacts are also regarded as mitigation.

In the case of mitigative management, some form of systematic data recovery, analysis and interpretation will be involved. The proponent and/or his archaeological consultant will be required to submit a detailed research proposal to the Branch prior to implementation.

This level of study involves the effective, professional management of endangered archaeological sites within the project area. The primary objectives are to:

- (a) implement acceptable measures for mitigating adverse impacts or compensating for resource losses;
- (b) report the objectives, methods and results of impact management; and
- (c) report the need for and general scope of any follow-up surveillance or monitoring.

Various options are available for the mitigation of adverse impacts on archaeological sites including changes in project design, the implementation of site protection measures, and systematic data recovery. The mitigative measure(s) which should be implemented in any specific case depends on:

- (a) the significance of the resource;
- (b) the nature and extent of the impact;
- (c) the relative effectiveness of the measure;
- (d) research and resource management priorities and needs; and
- (e) project objectives, conditions and constraints.

3.6.1.1 Project Design Changes

An important means of mitigating adverse project impacts on archaeological sites is to institute changes in the design or location of a project, or to alter the level of development intensity. Design alternatives are recommended in the impact assessment study and subsequently incorporated in the final project design.

Alterations in project design are viable mitigation measures wherever adverse impacts on archaeological sites are avoided or reduced as a result. Impacts can be avoided by relocating project facilities such as construction camps, stockpiles and transmission towers, or re-aligning linear developments such as oil and gas pipelines, transmission lines, railways, and roads. Fences or other suitable barriers should be erected, despite avoidance measures, as an added precaution where archaeological sites are situated close to a construction area. Avoidance is always the preferred mitigation measure as it ensures complete *in situ* protection of the resource for future investigation or use. Moreover, it is often the least costly measure to implement.

Reducing the effects of project actions on archaeological sites can also be accomplished by decreasing the amount of development or by using construction practices which minimize ground disturbance. Examples include restrict-

ing the use of heavy machinery on a site, clearing land over suitable snow cover, and using project buildings without subsurface foundations.

3.6.1.2 Site Protection

Archaeological preservation can also be achieved through measures that prevent or forestall site destruction. Site protection measures include protective covering, stabilization, and physical barriers. The feasibility and suitability of implementing one or other of these protective measures may require a geophysical assessment.

Site capping or burial involves judiciously covering an archaeological site with fill, asphalt, peat, concrete, etc. Once capped, project construction or other activities may be permitted to occur unimpeded over the site. However, site capping is an appropriate mitigative measure only when it can be demonstrated that important data will not be irrevocably lost through compaction, accelerated decomposition, horizontal displacement, or subtle changes in soil chemistry. In addition, capping must take into account the degree to which future investigation and use may be foreclosed because of inaccessibility.

Stabilization measures and the use of protective barriers may be appropriate in cases where archaeological sites are adjacent to the construction zone, and in areas where erosion or slope failure are anticipated. Under these conditions, the destruction or erosion of archaeological sites may be prevented by constructing barriers such as fences, dykes and gabions, or by utilizing landscaping practices such as differential clearing and slope terracing. Water diversion channels, designed to minimize erosional processes, may also be considered protective barriers. In addition, a suitable buffer zone, within which no land alteration or other activity is permitted, is often necessary to ensure adequate site protection. Buffer width should depend on the degree of uncertainty concerning site size and the type of activity proposed.

Archaeological site vandalism and the unlicensed collection of artifacts and "digging" of sites, are often indirect consequences of a project. Vandalism may be precipitated by disclosing site locations or by facilitating public access to otherwise inaccessible areas. Although site protection measures can play an important role in controlling vandalism, other approaches are usually required. Since site vandalism is primarily an educational problem, one approach is to conduct information programs for project personnel that promote archaeological conservation. In addition, the development of archaeological sites as special interest areas can also serve to deter vandalism, while allowing the resource to be of direct public benefit. An ongoing program of patrolling and monitoring archaeological sites should also be considered.

3.6.1.3 Systematic Data Recovery

The systematic investigation and recovery of data from archaeological sites represents a third, but less desirable, mitigation option. A principle disadvantage is that the recovery process itself is destructive; foreclosing future opportunities for scientific research, preservation or public appreciation. Furthermore, even the most intensive and sophisticated recovery program is seldom able to retrieve all the data in an archaeological site; invariably a great deal of information is lost. Proper data recovery and analysis is also very time consuming and expensive, and recovery costs are often difficult to estimate accurately. Therefore, systematic data recovery should be considered only as a last resort when both avoidance and site protection measures are impractical.

Where data recovery is the only viable mitigative option, it should be based on an adaptive, flexible research design and employ professionally accepted methods and techniques. Data recovery should aim to generate further scientific understanding and enhance public appreciation and awareness of the resource. Multi-disciplinary collaboration and problem-oriented research are encouraged.

Archaeological research goals will vary depending on current regional research and resource management priorities and needs. However, once defined, the specific research problems and objectives constitute the limits of a proponent's responsibility in data recovery and analysis.

The level or intensity of data recovery will depend on the number of sites involved, site significance, size and structural complexity, and the level of adverse effect. Because proper understanding of an archaeological site depends on knowledge of the larger settlement/subsistence system into which it fits, adequate mitigation may require investigation of other unaffected sites.

Systematic data recovery from archaeological sites involves:

- (a) a complete or partial systematic surface collection, excavation, or both;
- (b) a comparative analysis and interpretation of content and contextual information; and
- (c) production of an investigative report.

All recovered data must be analyzed, interpreted and reported, and artifact curation must be arranged beforehand. The materials and records of the investigation must be available and accessible to future researchers.

3.6.2 Compensation

The unavoidable loss of significant archaeological resources as a result of project impacts should be compensated in-cash or in-kind. Compensation in-cash refers to direct monetary payment. The Branch will determine, depending on equity and efficiency considerations, to whom the payment should be made.

Compensation in-kind refers to measures other than direct cash payment. An important form of compensation in-kind is the acquisition of property, unaffected by project development, for the purpose of establishing archaeological reserves. In principle, the land or archaeological property to be acquired should be equivalent to the foreclosed resources in terms of topographic setting, types of resources, integrity, significance and other factors. Site surveys or investigations, including systematic data recovery in areas unaffected by a project, may also be suitable compensative measures.

Compensation in-kind also includes a wide range of public-oriented archaeological programs and specific investigative projects. These programs, whether of local, regional or provincial scale, are often of a thematic nature and include site restoration, reconstruction or development. The objective is to enhance public understanding and awareness of British Columbia's archaeological resources.

3.6.3 Surveillance

Surveillance is undertaken in order to protect archaeological resources during project construction by ensuring compliance with and proper execution of adopted mitigation measures; particularly any conditions or restrictions on the nature of construction or level of development. Surveillance may be necessary where archaeological site protection measures are implemented both before and during project construction.

3.6.4 Monitoring

Monitoring is undertaken to ensure that adverse project impacts on archaeological sites which could not be predicted or evaluated prior to construction are addressed. Project actions that may unexpectedly expose and disturb recorded as well as previously unknown sites warrant at least periodic monitoring. For example, the shoreline of a newly created reservoir should be monitored during the stabilization period to document unanticipated impacts on archaeological sites resulting from slope failure and shoreline erosion. In addition, monitoring is undertaken in order to assess the effectiveness of mitigation measures, as well as the magnitude, severity or duration of an impact.

3.6.5 Emergency Impact Management

It is occasionally necessary to implement emergency measures to mitigate unanticipated impacts on archaeological sites. These measures may be required where mitigation efforts are found to be ineffective or fail outright, or where project actions have inadvertently uncovered significant archaeological sites.

Emergency impact management involves one or more of the following actions:

- (a) avoidance through partial or complete project redesign or relocation;
- (b) application of site protection measures; and
- (c) salvage or emergency excavation.

Salvage excavation implies rapid data recovery with little or no opportunity for problem-oriented research. The principal objective is simply to recover data which would otherwise be lost. Salvage excavation differs significantly from systematic data recovery, which is initiated before construction. Neither strategy is intended to replace the other.

In situations where unpredicted impacts occur, construction activities must be stopped and the Branch should be notified immediately. The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological data.

Appendix A

Guidelines for Report Content

Overview Report

Title Page

The title page should include:

- (a) the official project name and location,
- (b) the type of archaeological resource assessment,
- (c) the number of the permit or ministerial order under which the research activities were authorized, if applicable,
- (d) the name and address of the agency for which the report was prepared,
- (e) the report date, and
- (f) the author's signature and title.

Credit Sheet

The credit sheet should contain the names, addresses and professional affiliations of the principal contributors to the overview study including:

- (a) the director or supervisor,
- (b) researchers, and
- (c) report author.

Management Summary

The management summary should contain a brief overview of the study. Important findings and major recommendations should be emphasized.

Table of Contents

The table of contents should be arranged in accordance with the sequence of topical headings and their corresponding page numbers.

List of Figures, Tables, Appendices

All figures, tables and appendices should be referenced by title and page number, and listed according to the order in which they appear in the text of the report.

Introduction

The introduction should include:

- (a) the name of the proponent and general nature of the proposed development,
- (b) project planning objectives,
- (c) the objectives and general scope of the archaeological overview,
- (d) the agency and persons conducting the assessment, as well as the kinds of professional expertise involved,
- (e) the dates and duration of the study, and
- (f) the organizational format of the report.

Proposed Project

This section should contain a brief summary of all pertinent development aspects of the proposed project. With the aid of maps, engineering plans, photos and other materials, the discussion should include, insofar as possible:

- (a) boundaries of the projected impact zone or study area for each project alternative considered,
- (b) the kinds and anticipated locations of all ancillary facilities,
- (c) general kinds of impacts the proposed project would likely have on archaeological resources in the study area,
- (d) aspects of project scheduling, and
- (e) alternative project designs or locations.

Study Area

This section should contain a brief description of the study area. The discussion should emphasize biophysical characteristics, both past and present, that may have influenced the density, distribution, variety and potential significance of archaeological resources.

Methodology

The basic research plan and the precise methods and equipment used to implement the plan should be documented in this section. Where the overview focuses on selecting a preferred project design from among several alternatives, the role of archaeological data in the selection process should be described.

Results

This section should contain the results of documentary research, direct consultation, and if applicable, preliminary field reconnaissance. Information should be reported here only to the extent that it relates to the basic objectives of the overview. Results of the background research should include:

- (a) a description of past land uses,
- (b) a summary of previous archaeological sites reported in the study area and a map showing their location,
- (c) a brief narrative description of all archaeological sites reported in the study area and a map showing their location.

Results of the preliminary field reconnaissance should include:

- (d) maps showing areas surveyed,
- (e) maps showing the location of all sites observed and recorded,
- (f) a brief narrative description and photo record of all recorded sites,
- (g) results of subsurface testing, surface collecting, or both, if applicable,
- (h) a description of all cultural materials observed or collected, and
- (i) results of experiments to determine a suitable archaeological site survey strategy for the study area.

Evaluation and Discussion

The assessment of archaeological resource potential in the study area, based on the major findings of background research and preliminary field reconnaissance, should be presented here. The assessment should be made from a local, regional and provincial perspective and should be based on known archaeological sites, as well as reported and predicted sites. In this section, the consultant should:

- (a) identify major information gaps in the archaeological resource base,
- (b) state predictions about the kinds and number of archaeological sites to be expected,
- (c) discuss and, insofar as possible, interpret the nature, distribution, and potential significance of archaeological resource values within the study area,
- (d) discuss, in general terms, potential impacts on the archaeological resource base and possible options for managing impacts, and
- (e) discuss local public attitude toward potential project impacts on archaeological resources.

Recommendations

The need for further archaeological studies, as well as the scope of these studies, should be identified and discussed here. If appropriate, the discussion should be directed toward the preferred project alternative selected on the basis of engineering, socio-economic and environmental considerations. Recommendations for further assessment should include:

- (a) maps showing precise areas requiring intensive field survey,
- (b) justification for no survey action in areas suggesting high archaeological resource potential,
- (c) a description of areas requiring special field consideration, and
- (d) the site survey strategy and methods to be used.

References Cited

A comprehensive list of all literary sources cited in the overview report such as publications, documents and records should be presented in this section. The reference list should also include names and dates of all personal communications.

Appendices

A variety of items should be appended to the overview report including:

- (a) a copy of the proponent’s or consultant’s terms of reference for the overview studies,
- (b) a bibliography of data sources consulted, but not necessarily cited in the report, which may be useful for future research,
- (c) names and addresses of persons or organizations interviewed during the background research stage of the study, and
- (d) a list of all recorded archaeological sites in the study area, as well as unrecorded sites reported in the literature or through informant interviews.

An impact assessment research proposal indicating specific study objectives, inventory, evaluation and impact assessment methods, work schedules, and other information may also be appended to the overview report. In some cases, the report itself may constitute the impact assessment proposal.

Impact Assessment Report

Title Page

The title page should include:

- (a) the official project name and location,
- (b) the type of archaeological resource assessment,
- (c) the number of the permit or ministerial order under which the research activities were authorized, if applicable,
- (d) the name and address of the agency for which the report was prepared,
- (e) the report date, and
- (f) the author’s signature and title.

Credit Sheet

The credit sheet should contain the names, addresses and professional affiliations of the principal contributors to the overview study including:

- (a) the director or supervisor,
- (b) researchers, and
- (c) report author.

Management Summary

The management summary should contain a brief overview of the study. Important findings and major recommendations should be emphasized.

Table of Contents

The table of contents should be arranged in accordance with the sequence of topical headings and their corresponding page numbers.

List of Figures, Tables, Appendices

All figures, tables and appendices should be referenced by title and page number, and listed according to the order in which they appear in the text of the report.

Introduction

The introduction should include:

- (a) the proponent’s name and general nature of the project,
- (b) the objective and scope of the impact assessment,
- (c) the persons conducting the assessment and the kinds of professional expertise involved,
- (d) the dates and duration of the study, and
- (e) the organizational format of the report.

Proposed Project

This section should contain a progress report on project planning. Engineering plans, photos and other illustrative materials should be used to discuss:

- (a) project design planning and archaeological resource assessment to date,
- (b) any changes in the original project design or in the level of development,
- (c) precise boundaries of the project area including locations of all ancillary activities and facilities,
- (d) the projected extent and level of land alteration or disturbance, and
- (e) project scheduling.

Project Area

This section should contain a brief description of the project area. Emphasis should be placed on relating the project area to the natural and cultural environments. The area of project impact may have been sufficiently described in the overview report, in which case a brief summary of and proper reference to the document will suffice. Description of the project area should include:

- (a) biophysical features such as physiography, drainage, fauna, and flora,
- (b) a discussion of past and present ecological conditions that bear upon human settlement and land use,
- (c) past and present land use practices
- (d) the condition of the land, particularly the extent of alteration from agricultural activity, forest harvesting, or other intensive land uses, and
- (e) weather conditions and patterns, particularly as they relate to or affect the conduct and scheduling of fieldwork.

Methodology

The basic research plan and the precise methods and equipment used to implement the plan should be outlined in this section. Each assessment activity (inventory, site evaluation, and impact identification and assessment) should be described individually. The discussions should include:

Inventory

- (a) a thorough account of the sampling design, particularly sample selection and size,
- (b) the rationale underlying any stratification of the project area according to the archaeological potential, and the level of survey intensity in these strata,
- (c) the number of surveyors, the manner in which they were deployed over the survey area including distance intervals and direction of travel, and the amount of time spent surveying any one area,
- (d) location of areas exempt from survey,
- (e) where and how often subsurface testing was employed, and the particular techniques or practices used including test frequency, interval spacing and unit dimensions,
- (f) site recording practices, and
- (g) sources consulted in designing the site inventory strategy.

Site Evaluation

- (h) information sources used such as evaluative testing, surface collecting, direct consultation and documentary research,
- (i) evaluative testing procedures including unit sampling or selection, test frequency, unit dimensions, mapping, recording and data recovery practices,
- (j) surface collecting procedures including sampling design, recording and collection practices,
- (k) the process used to derive a measure of relative site significance including the system of ranking or weighting various significance criteria and the rationale underlying the process,
- (l) the kinds of professional expertise involved.

Impact Identification and Assessment

- (m) how project impacts were identified, and
- (n) the process used to assess impacts on archaeological resources including assessment criteria, their relative weighting, and the rationale underlying the process.

Resource Inventory

This section should contain results of the archaeological site inventory including:

- (a) maps showing areas surveyed, including the locations of survey transects and subsurface tests, as well as the ranking of archaeological site potential where appropriate,
- (b) maps showing all recorded archaeological sites in relation to the proposed project,
- (c) the number of archaeological sites recorded and the total anticipated in the project area,
- (d) a brief narrative or tabular description of each site including present condition and use, distinguishing features, and its general relationship to the regional environment and cultural setting,
- (e) a qualitative and quantitative summary of all cultural material or features observed or collected,

- (f) an interpretation of the archaeological resource inventory including observed spatial patterning of sites in the project area, temporal, functional and contextual characteristics, and comparisons with other local or regional resources,
- (g) an explanation of negative results, such as where and why archaeological sites were absent in areas suspected of having moderate to high resource potential, and
- (h) any further predictions concerning potential resource variability, density, distribution and importance in the project area.

Resource Evaluation

The relative significance of each evaluated site should be present here. The discussion should include:

- (a) specific criteria used to measure relative site significance,
- (b) site-specific assessments in tabular form, and
- (c) a map illustrating archaeological sites of high, medium, and low significance in relation to the proposed project.

Impact Identification and Assessment

This section should contain a comprehensive statement of impacts and a thorough assessment of their level-of-effect. An impact matrix relating development actions to recorded archaeological resources is recommended. The impact assessment should include:

- (a) a map of the project delineating areas of direct and indirect impact, and showing all recorded archaeological sites,
- (b) impacts which have occurred to date from exploration, engineering and other feasibility studies,
- (c) the level of effect of project impacts on archaeological values,
- (d) areas of uncertainty regarding the impact assessment,
- (e) a schedule relating the timing of impacts to development stages, and
- (f) impacts and the rate of resource depletion expected without the proposed project.

Evaluation of Research

This section should contain a critical evaluation of the impact assessment study. The discussion should address:

- (a) the accuracy of overview predictions regarding archaeological resource density, distribution, variety and significance in the project area,
- (b) the suitability of the inventory strategy and site survey techniques employed, and the level of confidence that can be placed on the survey results,
- (c) the suitability and reliability of the site evaluation and impact assessment methods employed,
- (d) the relationship between the results and the stated objectives of the assessment study, including problem-oriented research objectives if applicable, and
- (e) appropriate research goals, objectives or opportunities for any subsequent archaeological studies in the project area.

Impact Management Recommendations

The proponent's recommendations for managing unavoidable adverse impacts on archaeological sites are presented here. Mitigation measures should be recommended for each impacted site. Recommendations should be presented in sufficient detail to allow the Branch to comment on their appropriateness. This section should also include:

- (a) a reference to those archaeological sites which can be avoided by project design modifications,
- (b) a discussion of the process used to select an impact management action from among various possible alternative actions for any specific site,
- (c) justification for not recommending site-specific action,
- (d) archaeological compensation recommendations, and
- (e) recommendations or a tentative schedule for conducting surveillance and/or monitoring during project implementation and operation.

References Cited

A comprehensive list of all literary sources cited in the report such as publications, documents and records should be presented in this section. The reference list should also include names and dates of all personal communications.

Appendices

A variety of items should be appended to the report including:

- (a) a copy of the consultant’s terms of reference for the impact assessment study,
- (b) appropriate tables, charts, graphs, maps, photos and other supportive materials, and
- (c) a list of all recorded archaeological sites, referenced by their appropriate “Borden” number and arranged according to either adverse impact or no adverse impact.

A detailed proposal for implementing mitigation or compensation studies may also be appended to the report. However, the proposal may require supervision if deficiencies in the report are identified.

Mitigation Report

Title Page

The title page should include:

- (a) the official project name and location,
- (b) the type of archaeological resource assessment,
- (c) the number of the permit or ministerial order under which the research activities were authorized, if applicable,
- (d) the name and address of the agency for which the report was prepared,
- (e) the report date, and
- (f) the author’s signature and title.

Credit Sheet

The credit sheet should contain the names, addresses and professional affiliations of the principal contributors to the overview study including:

- (a) the director or supervisor,
- (b) researchers, and
- (c) report author.

Management Summary

The management summary should contain a brief overview of the study. Important findings and major recommendations should be emphasized.

Table of Contents

The table of contents should be arranged in accordance with the sequence of topical headings and their corresponding page numbers.

List of Figures, Tables, Appendices

All figures, tables and appendices should be referenced by title and page number, and listed according to the order in which they appear in the text of the report.

Introduction

The introduction should include:

- (a) the name of the proponent and general nature of the project,
- (b) how the study integrates or coordinates with project planning and scheduling,
- (c) the objectives and scope of the impact management program including specific research problems,
- (d) the dates and duration of the study,
- (e) the persons conducting the study and the kinds of professional expertise involved, and
- (f) the organization format of the report.

Study Area

This section should contain a succinct description of the location and boundaries of the study area, including specific areas in which mitigation activities were undertaken. Previous studies which provide comprehensive descriptions of the study area should be referenced. However, biophysical, socio-economic, political or cultural factors which have a direct and pertinent bearing on the study should be explicitly stated.

Methodology

The basic research plan and the precise methods and equipment used to implement the plan should be documented in this section. All relevant aspects of the operating environment should be discussed.

Results and Discussion

The results of mitigation or compensation should be presented and discussed here. A thorough analysis of all recovered data should be provided.

Interpretation

An interpretation of results is primarily required for systematic data recovery and other investigative projects. The interpretation should focus on the research problems and study objectives initially identified.

Conclusions and Recommendations

This section should contain a synthesis of the impact management studies. New research problems and hypotheses generated by systematic data recovery or for future research and resource management should also be included.

References Cited

All literary sources cited in the report such as publications, documents and records, as well as names and dates of all personal communications should be listed here.

Appendices

- A variety of items should be appended to the report including:
- (a) appropriate tables, charts, graphs, maps and other supportive materials,
 - (b) a list of recorded archaeological sites directly relevant to the study, and
 - (c) a complete catalogue of all cultural materials, faunal and floral remains, and ancillary samples collected during systematic data recovery operations.

Appendix B

Heritage Conservation Act

CONVENIENCE COPY ONLY
LEGISLATION IS SUBJECT TO CHANGE

HERITAGE CONSERVATION ACT

CHAPTER 187

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PART 1 – INTRODUCTION

Definitions

1 In this Act:

“alter” means to change in any manner and, without limiting this, includes

- (a) the making of an improvement, as defined in the *Builders Lien Act*, and
- (b) any action that detracts from the heritage value of a heritage site or a heritage object;

“board” means the board of directors of the Heritage Trust;

“conservation” includes any activity undertaken to protect, preserve or enhance the heritage value of heritage property;

“designate” means to designate under section 9;

“first nation” means, as the context requires, an aboriginal people sharing a common traditional territory and having a common traditional language, culture and laws, or the duly mandated governing body of one or more such people;

“heritage inspection” means a physical examination and other research necessary

- (a) to identify the heritage value of property or a portion of it, and
- (b) to establish, if the property is a heritage site or heritage object,
 - (i) the need for protection and conservation, or
 - (ii) conformance with heritage protection requirements;

“heritage investigation” means an archaeological or other systematic study of heritage property to reveal its history, and may include the recording, removal and analysis of artifacts, features and other material necessary for the purpose of the heritage investigation;

“heritage object” means, whether designated or not, personal property that has heritage value to British Columbia, a community or an aboriginal people;

“heritage site” means, whether designated or not, land, including land covered by water, that has heritage value to British Columbia, a community or an aboriginal people;

“Heritage Trust” means the British Columbia Heritage Trust continued under section 24 (1);

“heritage value” means the historical, cultural, aesthetic, scientific or educational worth or usefulness of a site or object;

“heritage wreck” means the remains of a wrecked vessel or aircraft if

- (a) 2 or more years have passed from the date that the vessel or aircraft sank, was washed ashore or crashed, or
- (b) the vessel or aircraft has been abandoned by its owner and the government has agreed to accept the abandonment for the purposes of this Act;

“local government” includes the council of a municipality, the board of a regional district, and the Trust Council and a local trust committee established under the *Islands Trust Act*;

“Provincial heritage object” means a heritage object designated under section 9;

“Provincial heritage site” means a heritage site designated under section 9 or a Provincial heritage property established under section 23.

Purpose of Act

2 The purpose of this Act is to encourage and facilitate the protection and conservation of heritage property in British Columbia.

Provincial heritage register

3 (1) The minister must establish and maintain one or more registers, to be known collectively as the Provincial heritage register, for the recording of the following:

- (a) Provincial heritage sites;
- (b) Provincial heritage objects;
- (c) heritage sites and heritage objects that are included in a schedule under section 4 (4) (a);
- (d) other known heritage sites and heritage objects that are, in the opinion of the minister, protected under section 13;
- (e) buildings, structures and sites for which the minister has received notice from a local government under section 977 (1) of the *Municipal Act* or section 602 (1) of the *Vancouver Charter*;
- (f) other prescribed heritage property.

(2) Subject to subsections (3) and (4), information in the Provincial heritage register must be available for inspection by any person during regular business hours.

(3) Despite the *Freedom of Information and Protection of Privacy Act*, the minister may refuse to disclose information in the Provincial heritage register and other information obtained in the administration of this Act or the *Museum Act* if any of the following apply:

- (a) disclosure of the information could, in the opinion of the minister, result in damage to or interfere with the conservation of a heritage site or heritage object;
- (b) disclosure of the information would violate an agreement made under section 4;

Section 4

- (c) anthropological information that is of traditional social, spiritual or other cultural importance to a living community
 - (i) was obtained under conditions of confidentiality, or
 - (ii) is confidential at the request of representatives of the community whose heritage is represented by the information.
- (4) The inspection of information in the Provincial heritage register is subject to reasonable conditions the minister may impose.
- (5) Without limiting subsection (4), the minister may require payment of a prescribed fee to inspect the information in the Provincial heritage register.
- (6) Protection of a heritage site or heritage object is not affected by an error or omission in the Provincial heritage register or, except for a Provincial heritage site or Provincial heritage object, by a failure to register property in the Provincial heritage register.

Agreements with first nations

- 4 (1) The Province may enter into a formal agreement with a first nation with respect to the conservation and protection of heritage sites and heritage objects that represent the cultural heritage of the aboriginal people who are represented by that first nation.
- (2) An agreement under subsection (1) must be in writing and must be approved by the Lieutenant Governor in Council.
- (3) Subsection (2) does not apply to an agreement that is entered into under section 20 (1) (b) or 28 (1) (b).
- (4) Without limiting subsection (1), an agreement made under this section may include one or more of the following:
 - (a) a schedule of heritage sites and heritage objects that are of particular spiritual, ceremonial or other cultural value to the aboriginal people for the purpose of protection under section 13 (2) (h);
 - (b) a schedule of heritage sites and heritage objects of cultural value to the aboriginal people that are not included in a schedule under paragraph (a);
 - (c) circumstances under which the requirements of sections 13 (1) and (2) and 14 (1) do not apply with respect to heritage sites and heritage objects, or to types of heritage sites and heritage objects, for which the first nation administers its own heritage protection;
 - (d) policies or procedures that will apply to the issuance of or refusal to issue a permit under section 12 or 14 with respect to
 - (i) sites and objects identified in a schedule under paragraph (a) or (b), or
 - (ii) other sites and objects or types of sites and objects identified in the agreement;

Section 5

- (e) provisions with regard to the delegation of ministerial authority under sections 12 and 14 (4);
- (f) any other provisions the parties agree on.
- (5) For the purpose of section 13 (2), if an agreement includes a schedule under subsection (4) (a), the agreement must identify actions which would constitute a desecration or which would detract from the heritage value of scheduled sites and objects, and different actions may be identified for different sites or objects or for different classes of sites or objects.

Act is binding on the government

- 5 Despite section 14 (2) of the *Interpretation Act*, this Act and the regulations and orders made under it are binding on the government.

Act prevails over conflicting legislation

- 6 If, with respect to any matter affecting the conservation of a heritage site or heritage object referred to in section 13 (2), there is a conflict between this Act and any other Act, this Act prevails.

Provincial heritage policies

- 7 The minister may, with the approval of the Lieutenant Governor in Council, establish policies and standards for the identification, conservation, management and disposition of any heritage site or heritage object owned or managed by the government.

No derogation of aboriginal and treaty rights

- 8 For greater certainty, no provision of this Act and no provision in an agreement entered into under section 4 abrogates or derogates from the aboriginal and treaty rights of a first nation or of any aboriginal peoples.

PART 2 – PROVINCIAL HERITAGE CONSERVATION**Heritage designation**

- 9 (1) The Lieutenant Governor in Council may
 - (a) designate land as a Provincial heritage site, or
 - (b) designate an object as a Provincial heritage object.
- (2) A designation under subsection (1) (a) may apply to land that does not have heritage value if, in the opinion of the Lieutenant Governor in Council, designation is necessary or desirable for the conservation of heritage property that is
 - (a) designated under this section,
 - (b) protected under section 13 (2),

Section 10

- (c) protected heritage property under the *Municipal Act* or the *Vancouver Charter*, or
 - (d) established under section 23.
- (3) A designation made under this section may do one or more of the following:
- (a) apply to a single property or to part of a property;
 - (b) apply to more than one property including properties owned by different persons;
 - (c) establish policies or procedures regarding the provision of financial or other support for the conservation of a heritage site or heritage object;
 - (d) specify types of alterations to the property which may be made without a permit under section 12;
 - (e) specify policies or procedures concerning the issuing of permits under section 12 with respect to a property.

Designation procedure

- 10 (1) Before a designation is made under section 9, the minister must serve notice of the proposed designation on the following persons:
- (a) in the case of land,
 - (i) all persons who, according to the records of the land title office, have a registered interest in the land to be designated,
 - (ii) the local government or local governments having jurisdiction over the land to be designated, and
 - (iii) the first nation or first nations within whose traditional territory the land to be designated lies;
 - (b) in the case of objects,
 - (i) the person who has possession of the object,
 - (ii) all parties who, according to the records of the personal property registry established under the *Personal Property Security Act*, have a registered interest in the object, and
 - (iii) any other person or party who, in the opinion of the minister, is or may be the owner of the object or has or may have a proprietary interest in the object;
 - (c) any other prescribed person.
- (2) A person or party served with notice under subsection (1) may serve the minister with a notice of objection to the proposed designation within 30 days after receiving the notice of the proposed designation.
- (3) On receiving a notice of objection, the minister must review the objection and may then amend or cancel the proposed designation as the minister considers appropriate.

Section 11

- (4) Before a designation is made, the minister must advise the Lieutenant Governor in Council if any notice of objection to the proposed designation has been received and, if so received, provide the Lieutenant Governor in Council with a copy of each notice of objection received, the results of the review of the notice or notices of objection and the terms and conditions of any amendment to the proposed designation.
- (5) Within 30 days after
 - (a) the minister cancels a proposed designation,
 - (b) the Lieutenant Governor in Council makes a designation, or
 - (c) the Lieutenant Governor in Council decides not to make a designation,
 the minister must serve notice on the persons entitled to notice under subsection (1) that a designation has or has not been made.
- (6) Within 30 days after a designation is made, the minister must register a description of the designated property in the Provincial heritage register established under section 3 (1) and,
 - (a) in the case of land, file a notice of the designation in the land title office in the manner provided under section 32, or
 - (b) in the case of personal property, file a notice of the designation in the personal property registry under the *Miscellaneous Registrations Act, 1992*.
- (7) No designation is invalid because of inadvertent and minor non-compliance with this section.

Compensation for heritage designation

- 11 (1) If a designation under section 9 causes, or will cause at the time of designation, a reduction in the market value of the designated property, the government must compensate an owner of the designated property who makes an application under subsection (2), and the compensation must be in an amount or in a form the minister and the owner agree on or, failing an agreement, in an amount or in a form determined by binding arbitration under subsection (4).
- (2) The owner of a designated property may apply to the minister for compensation for the reduction in the market value of the designated property.
- (3) An application under subsection (2)
- (a) must be made, in order for the owner to be entitled to compensation under this section, no later than one year after the designation under section 9, and
 - (b) may be made before the designation under section 9.
- (4) If the minister and the owner are unable to agree
- (a) that the owner is entitled to compensation under subsection (1), or
 - (b) on the amount or form of compensation,

Section 12

then either the minister or the owner may refer the matter to binding arbitration under the *Commercial Arbitration Act*.

- (5) An arbitration under this section must be by a single arbitrator unless the minister and the owner agree to the appointment of an arbitration panel.
- (6) The arbitrator or arbitration panel, in determining whether the owner is entitled to compensation and the amount or form of compensation, must consider
 - (a) eligibility for financial and other support for conservation of the heritage site or heritage object, and
 - (b) any other benefits that are available because of the designation of the property.
- (7) Compensation must not be paid, and an arbitration must not continue, if
 - (a) the minister cancels the proposed designation, or
 - (b) the Lieutenant Governor in Council does not make the designation.
- (8) Nothing in this section authorizes the government to give any financial or other benefit to an owner except that which is commensurate with the reduction in market value of the designated property as caused by that designation.
- (9) This section does not apply to property that, immediately before its designation under section 9, is
 - (a) designated as a Provincial heritage site,
 - (b) designated as a heritage object,
 - (c) protected under section 13 (2), or
 - (d) designated under section 967 of the *Municipal Act* or section 593 of the *Vancouver Charter*.

Permits

- 12 (1) In this section, except subsection (6), and in sections 13 (4) and 14 (4), "minister" includes a person authorized in writing by the minister for the purposes of the section.
- (2) The minister may
 - (a) issue a permit authorizing an action referred to in section 13, or
 - (b) refuse to issue a permit for an action that, in the opinion of the minister, would be inconsistent with the purpose of the heritage protection of the property.
- (3) A permit issued under subsection (2) (a) may include requirements, specifications and conditions that the minister considers appropriate and, without limiting the generality of this, the permit may
 - (a) be limited to a specified period of time or to a specified location,
 - (b) require the holder of the permit to consult with or obtain the consent of one or more parties whose heritage the property represents or may represent,

Section 13

- (c) require the holder of the permit to provide the minister with reports satisfactory to the minister, and
- (d) specify a repository for heritage objects that are removed from the heritage property.
- (4) Despite any other enactment, a permit issued under subsection (2) (a) may specify the siting, dimensions, form, exterior design and finish of new construction or renovations to a building or structure.
- (5) The minister may, with the concurrence of the holder of the permit, amend, suspend or cancel a permit issued under subsection (2) (a).
- (6) The minister may, by order, without the concurrence of the holder of the permit,
 - (a) amend or suspend a permit issued under subsection (2) (a) if the minister has information that was not considered when the permit was issued respecting the heritage value of heritage property that would be materially affected by an action authorized by the permit, or
 - (b) cancel a permit issued under subsection (2) (a) if the minister has reasonable and probable grounds to believe that
 - (i) the application for the permit included information that was false or misleading with respect to a material fact, or that omitted to state a material fact the omission of which makes information in the application false or misleading,
 - (ii) the holder has contravened or is in default of a requirement or condition of the permit, whether or not the holder is charged with an offence under this Act, or
 - (iii) the holder has contravened a provision of this Act, whether or not the holder is charged with an offence under this Act.
- (7) A permit does not authorize the holder of the permit to enter property, or to make any alteration to property, without the permission of the owner or occupier.

Heritage protection

- 13 (1) Except as authorized by a permit issued under section 12 or 14, a person must not remove, or attempt to remove, from British Columbia a heritage object that is protected under subsection (2) or which has been removed from a site protected under subsection (2).
- (2) Except as authorized by a permit issued under section 12 or 14, or an order issued under section 14, a person must not do any of the following:
 - (a) damage, desecrate or alter a Provincial heritage site or a Provincial heritage object or remove from a Provincial heritage site or Provincial heritage object any heritage object or material that constitutes part of the site or object;

Section 13

- (b) damage, desecrate or alter a burial place that has historical or archaeological value or remove human remains or any heritage object from a burial place that has historical or archaeological value;
 - (c) damage, alter, cover or move an aboriginal rock painting or aboriginal rock carving that has historical or archaeological value;
 - (d) damage, excavate, dig in or alter, or remove any heritage object from, a site that contains artifacts, features, materials or other physical evidence of human habitation or use before 1846;
 - (e) damage or alter a heritage wreck or remove any heritage object from a heritage wreck;
 - (f) damage, excavate, dig in or alter, or remove any heritage object from, an archaeological site not otherwise protected under this section for which identification standards have been established by regulation;
 - (g) damage, excavate, dig in or alter, or remove any heritage object from, a site that contains artifacts, features, materials or other physical evidence of unknown origin if the site may be protected under paragraphs (b) to (f);
 - (h) damage, desecrate or alter a site or object that is identified in a schedule under section 4 (4) (a);
 - (i) damage, excavate or alter, or remove any heritage object from, a property that is subject to an order under section 14 (4) or 16.
- (3) The Lieutenant Governor in Council may make regulations respecting the following:
- (a) defining the extent of types of sites protected under subsection (2), except heritage sites or objects protected under subsection (2) (h);
 - (b) identifying types of features, material or evidence for which the requirements of subsection (2) (d) and (g) do not apply, and these may be different for different types of sites;
 - (c) establishing identification standards for archaeological sites to be protected under subsection (2) (f);
 - (d) identifying actions that shall be deemed to derogate from the heritage value of a site or object, or class of sites or objects, protected under subsection (2), except with respect to sites protected under subsection (2) (h).
- (4) The minister may, after providing an opportunity for consultation with the first nation whose heritage site or object would be affected,
- (a) define the extent of a site protected under subsection (2), or
 - (b) exempt a site or object from subsection (2) on any terms and conditions the minister considers appropriate if the minister considers that the site or object lacks sufficient heritage value to justify its conservation.
- (5) Subsection (4) does not apply to a site or object protected under subsection (2) (h).

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- (6) Except as authorized by a permit issued under section 12, a person must not damage, alter or remove
 - (a) a notice erected under section 17, or
 - (b) a plaque or marker installed under section 18.

Heritage inspection and heritage investigation

- 14**
- (1) A person must not excavate or otherwise alter land for the purpose of archaeological research or searching for artifacts of aboriginal origin except under a permit or order issued under this section.
 - (2) The minister may, by permit, authorize a heritage inspection or heritage investigation of any property.
 - (3) A permit issued under subsection (2) does not authorize entry onto land or into a building without the permission of the owner or occupier.
 - (4) The minister may order that a heritage inspection or heritage investigation be conducted if the minister considers that any one or more of the following apply:
 - (a) land may contain a heritage site or heritage object protected under section 13;
 - (b) land that may have heritage value, or that may include a heritage site or heritage object, may be subject to subdivision;
 - (c) the property may be subject to alienation from government ownership;
 - (d) property that may have heritage value, or land that may include heritage property, may be subject to alteration by natural or human causes;
 - (e) an object that may have heritage value may be subject to removal from British Columbia.
 - (5) The provisions of section 12 (2), (2.1), (2.2), (3), (5) and (6) apply to permits and orders under this section.
 - (6) A heritage inspection or heritage investigation ordered under subsection (4)
 - (a) must state the purpose of the heritage inspection or heritage investigation,
 - (b) must specify how long the order is to remain in effect,
 - (c) must require that the heritage inspection or heritage investigation be carried out in an expeditious manner,
 - (d) may provide that property covered by the order is subject to protection under section 13 while the order remains in effect,
 - (e) may require the owner to undertake actions to preserve the integrity and condition of property covered by the order while the order remains in effect, and
 - (f) may include any terms, conditions or specifications that the minister considers appropriate for the purpose of the heritage investigation.

- (7) If an order for a heritage inspection or heritage investigation made under subsection (4) relates to
- (a) alienation of government owned property,
 - (b) a public work authorized to be undertaken by or under an Act,
 - (c) the extraction or harvesting of resources from land,
 - (d) the subdivision of land, or
 - (e) changes in use or development of land,
- the minister may require the person purchasing, subdividing, developing or using the property to undertake or pay for the heritage inspection or heritage investigation.
- (8) A person must not interfere with a heritage inspection or heritage investigation ordered under subsection (4).
- (9) A person whose property is damaged during the course of a heritage inspection or heritage investigation ordered under subsection (4) is entitled to have the damage repaired at the expense of the government or, if the damage cannot be repaired, to compensation from the government.

Entry authority for heritage inspection and heritage investigation orders

- 15 (1) An order made under section 14 (4) authorizes the person or persons conducting the heritage inspection or heritage investigation to enter land identified in the order at any reasonable time for the purposes of the heritage inspection or heritage investigation.
- (2) Before entering or when entering land under subsection (1), the person conducting the heritage inspection or heritage investigation must make a reasonable attempt to notify the owner or occupier of the land and, if requested, present proof of his or her authorization.
- (3) Except as provided in subsection (4), nothing in this section or in an order made under section 14 (4) authorizes entry into a building without the permission of the owner or occupier.
- (4) A justice may issue a warrant authorizing a person to enter land or a building to conduct a heritage inspection or heritage investigation ordered under section 14 (4) if the justice is satisfied that
- (a) there are reasonable grounds to believe that entry is required to achieve the purposes of the order, and
 - (b) there are reasonable grounds to believe that
 - (i) an emergency exists,
 - (ii) the person conducting the heritage inspection or heritage investigation has been unable to notify the owner or occupier after making a reasonable attempt to do so,
 - (iii) the admission has been refused or refusal is anticipated, or
 - (iv) the notification may defeat the object of the entry.

- (5) A warrant issued under subsection (4) continues in force until the purpose for which the entry is required has been satisfied.
- (6) If a heritage inspection or heritage investigation conducted under the authority of a warrant under subsection (4) requires entry into a building, the person conducting the heritage inspection or heritage investigation must be accompanied by a peace officer.
- (7) On completion of a heritage inspection or heritage investigation ordered under section 14 (4), if the owner of land was not notified under subsection (2), the person undertaking the heritage inspection or heritage investigation must mail a notice informing the owner that a heritage inspection or heritage investigation has been conducted.

Temporary protection orders

- 16 If the minister considers that property has or may have heritage value and is likely to be altered for any reason, the minister may issue, to a person or class of persons, a stop work order that prohibits any alteration of the property for a period of up to 120 days, subject to any requirements and conditions the minister considers appropriate.

Notices and immunity

- 17 The minister may erect and maintain a notice referring to this Act, or an order made under this Part, on or near a Provincial heritage site, and an action for loss, damage or trespass must not be brought for anything done or omitted in good faith under this section.

Promotion of heritage value

- 18 The minister may acknowledge the heritage value of any heritage site or heritage object by issuing a certificate or, with the permission of the owner, by installing a commemorative plaque or marker.

Unclaimed objects in heritage collections

- 19 (1) A public museum, archive or other heritage conservation organization that has possession of an object that it does not own, or is uncertain as to whether it owns, may apply to the Supreme Court for an order vesting ownership of the object in the museum, archive or organization if one of the following applies:
- (a) a reasonable attempt has been made to locate the owner of the object and
 - (i) at least 25 years have passed since the making of a written agreement with the owner of the object for custody of the object, or
 - (ii) at least 10 years have passed since the making of an oral agreement with the owner of the object for custody of the object and there is no known written custody agreement;
 - (b) at least 2 years have passed since the museum, archive or organization gave to the owner of the object a notice of the termination of a custody agreement with respect to the object;

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- (c) the owner of the object cannot be identified or the circumstances of the acquisition of the object are not known;
 - (d) the object was acquired from a person who may not have been the true owner.
- (2) On application under subsection (1), the court may, with respect to the object that is the subject of the application, make an order vesting ownership of the object in
- (a) the museum, archive or organization that made the application, or
 - (b) any other party the court considers is the most appropriate to own the object having regard to any heritage value the object may possess.
- (3) Before making an order under subsection (2), the court must be satisfied that
- (a) a requirement of subsection (1) has been met,
 - (b) the limitation in subsection (6) does not apply,
 - (c) a reasonable attempt has been made to notify any other parties who may have an interest in the application, and
 - (d) all parties the court considers to have an interest in the application have been given a reasonable opportunity to be heard.
- (4) An order under subsection (2) may include any terms or conditions that the court considers appropriate.
- (5) If an order vesting ownership is made under this section, the previous owner has no further claim to ownership of the object or to compensation for the object.
- (6) This section does not apply to an object that has cultural heritage value to an aboriginal people.

Powers of the minister

- 20 (1) To further the objects of this Act, the minister may do one or more of the following:
- (a) acquire, manage and conserve property or acquire an interest in property;
 - (b) enter into agreements with a person, organization, local government, first nation or the government of Canada or of a province;
 - (c) conduct and arrange exhibits or activities to inform and stimulate the interest of the public in any matter related to the purposes of this Act;
 - (d) subject to a trust or agreement under which a property was obtained, dispose of the property and execute instruments required to effect the disposal;
 - (e) receive, by donation, public subscription, devise, bequest or otherwise, money or property;
 - (f) assist in or undertake research, study or publication respecting heritage conservation;
 - (g) provide grants, advice and services to other parties having aims and objectives consistent with the purposes of this Act;

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- (h) establish and maintain one or more inventories of heritage sites and heritage objects, including a list of heritage buildings for which the Alternate Compliance Methods of the British Columbia Building Code may apply.
- (2) Property acquired by the minister under this Act is the property of the government and title to the property may vest in the name of the government.
- (3) Despite the *Land Act*, property acquired by the minister under this Act may be dealt with by the minister under this Act.

Preservation intervention

- 21 (1) If the minister considers that property protected under section 13 (2) is subject to damage or deterioration, the minister may order the owner, on terms and conditions that the minister considers appropriate, to preserve the property at the expenses of the government.
- (2) If the minister considers that property protected under section 13 (2) is subject to damage or deterioration and is being unreasonable neglected by the owner, the minister may order the owner, on terms and conditions and to specifications that the minister considers appropriate, to preserve the property at the expense of the owner or at the expense of the owner and the government on a cost sharing basis.

Advisory committees

- 22 (1) The minister may establish or authorize one or more committees to act in an advisory capacity on matters relating to this Act or to the conservation of heritage sites, heritage objects and other heritage resources.
- (2) The minister may appoint, or provide for the manner of appointment of, the members of any committee established under this section and may set the terms of reference for the committee.
- (3) The members of any committee established or authorized under this section must be paid reasonable and necessary travelling and incidental expenses incurred in the discharge of their duties under this Act, and may be paid remuneration for services in an amount determined by the Lieutenant Governor in Council.

Provincial heritage properties

- 23 (1) The Lieutenant Governor in Council may, by order, designate a heritage site on Crown land as a Provincial heritage property and the Provincial heritage property includes the collection of accessioned artifacts associated with that heritage site.
- (2) The Lieutenant Governor in Council may, by regulation, provide that any provision of the *Park Act* applies to a Provincial heritage property designated under subsection (1), and all authorities, rights, duties and other matters under these provisions will apply in relation to

- (a) the minister as though he or she were the minister under the *Park Act*,
 - (b) any branch or agency assigned by the minister to administer a Provincial heritage property as though it were the Parks Branch under the *Park Act*,
 - (c) the director and staff of a branch or agency referred to in paragraph (b) as though they were the directors and officers respectively of the Parks Branch, and
 - (d) the Provincial heritage property as though it were a Class A park established under the *Park Act*.
- (3) If a park use permit applies in respect of land when that land is established as a Provincial heritage property under subsection (1), that permit is deemed to have been issued under this section by the minister, and subsection (2) applies for the purpose of interpretation of that permit.

PART 3 – BRITISH COLUMBIA HERITAGE TRUST

Heritage Trust continued

- 24 (1) The British Columbia Heritage Trust is continued as a corporation.
- (2) The Heritage Trust is for all purposes an agent of the government and the powers of the Heritage Trust may be exercised only as an agent of the government.
- (3) Subject to the other provisions of this Part, the Heritage Trust has the power and capacity of a natural person of full capacity.
- (4) The *Company Act* does not apply to the Heritage Trust but the Lieutenant Governor in Council may, by order, direct that one or more provisions of the *Company Act* apply to the Heritage Trust.

Objects of Heritage Trust

- 25 The objects of the Heritage Trust are as follows:
- (a) to conserve and support the conservation of heritage sites and heritage objects;
 - (b) to gain further knowledge about British Columbia's heritage;
 - (c) to increase public awareness, understanding and appreciation of British Columbia's heritage;
 - (d) to undertake such other activities related to British Columbia's heritage as the minister may authorize.

Directors

- 26 (1) The Lieutenant Governor in Council must appoint a board of directors of the Heritage Trust.
- (2) The Lieutenant Governor in Council must designate one of the directors as chair and one or more of the directors as vice chair of the board.

- (3) The directors must be paid reasonable and necessary travelling and incidental expenses incurred in the discharge of their duties under this Act, and may be paid remuneration for services in an amount determined, on the recommendation of the board, by the Lieutenant Governor in Council.
- (4) The board may
- (a) determine its own procedure and provide for the regulation and conduct of its meetings,
 - (b) delegate any of the powers, functions and duties of the Heritage Trust to a committee of directors, to an officer or employee of the Heritage Trust or of the ministry or to any other person, and
 - (c) establish rules or policies governing the powers, functions or duties delegated under paragraph (b).

Officers and employees

- 27 (1) The board may appoint officers and employees of the Heritage Trust as it considers necessary.
- (2) The power of appointment under subsection (1) is subject to the *Public Service Act*, and employees of the Heritage Trust are deemed to be employees and the Heritage Trust is deemed to be an employer in respect to those employees for the purposes of the *Public Service Act*, the *Public Service Labour Relations Act* and the *Pension (Public Service) Act*.
- (3) The minister may authorize an employee of the ministry to provide services to the Heritage Trust, with or without compensation from the Heritage Trust.
- (4) The Lieutenant Governor in Council may make an order to transfer one or more employees of the ministry to the Heritage Trust, and such an order must
- (a) identify by name each employee of the ministry who is to be transferred to the Heritage Trust,
 - (b) specify a transfer date for each employee who is to be transferred, and
 - (c) establish conditions for the transfer that the Lieutenant Governor in Council considers advisable to preserve the rights and benefits of the employees to be transferred.
- (5) On the transfer date specified by an order under subsection (4), an employee of the ministry named in the order ceases to be an employee of the ministry and becomes an employee of the Heritage Trust as if he or she were appointed under subsection (1), subject to any conditions established under subsection (4) (c).

Powers of Heritage Trust

- 28 (1) To further the objects of this Part, the Heritage Trust may do one or more of the following:
- (a) acquire, manage and conserve property or acquire an interest in property;
 - (b) enter into agreements with a person, organization, local government, first nation or the government of Canada or of a province;

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- (c) conduct and arrange exhibits or activities to inform and stimulate the interest of the public in any matter related to the purposes of this Part;
 - (d) subject to a trust or agreement under which a property was obtained, dispose of the property and executive instruments required to effect the disposal;
 - (e) receive money or property by donation, public subscription, devise, bequest or otherwise;
 - (f) charge fees for any service that it provides including fees for the use of or admission to any of the facilities that it operates;
 - (g) assist in or undertake research, study or publication respecting heritage conservation;
 - (h) provide grants, advice and services to other parties having aims and objectives consistent with the purposes of this Part;
 - (i) subject to terms and conditions it may choose to apply, lend money from the trust fund continued under section 29 or guarantee loans made by a financial institution for the acquisition, management, conservation or development of heritage property by a party referred to in paragraph (b);
 - (j) do such other things as the Lieutenant Governor in Council may authorize.
- (2) Subject to the approval of the Lieutenant Governor in Council, the Heritage Trust may, for the purpose of engaging in a commercial, industrial or business undertaking,
- (a) incorporate a corporation,
 - (b) acquire shares in a corporation, or
 - (c) enter into a partnership or joint venture.
- (3) Subject to the approval of the Lieutenant Governor in Council, the Heritage Trust may borrow money in accordance with regulations made under section 75 of the *Financial Administration Act*.

Heritage Trust Fund

- 29 (1) The fund maintained under section 22 (1) of the *Heritage Conservation Act* as it read immediately before October 14, 1994, is continued as the British Columbia Heritage Trust Fund.
- (2) The Heritage Trust must pay any money received by it into the fund.
- (3) The Heritage Trust may pay money out of the fund for
- (a) remuneration, expenses and compensation referred to in sections 26 and 27,
 - (b) operation and administration expenses of the Heritage Trust,
 - (c) investments referred to in subsection (4), and
 - (d) any other expenses incurred in the exercise of its powers.

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- (4) Money of the fund may be invested in
- (a) the acquisition, management, conservation and development of property under section 28 (1) (a),
 - (b) loans made under section 28 (1) (i), and
 - (c) investments approved by the Minister of Finance and Corporate Relations.

Financial administration

- 30 (1) The Heritage Trust must establish and maintain an accounting system satisfactory to the Minister of Finance and Corporate Relations, and must render detailed accounts of its revenues and expenditures as required by that minister.
- (2) The Minister of Finance and Corporate Relations may direct the Comptroller General to examine and report on any or all of the financial and accounting operations of the Heritage Trust.
- (3) The accounts of the Heritage Trust must, at least once every year, be audited and reported on by an auditor appointed by the board.
- (4) The Heritage Trust must annually, within 120 days of the end of its fiscal year, submit to the minister
- (a) a report of the Heritage Trust and its operations for the preceding fiscal year,
 - (b) a financial statement showing the assets and liabilities of the Heritage Trust at the end of the preceding fiscal year, and
 - (c) the annual report of the auditor referred to in subsection (3).
- (5) The report and financial statement referred to in subsection (4) must be laid before the Legislative Assembly by the minister during the next session of the Legislative Assembly following the submission of the report and financial statement to the minister.
- (6) The *Financial Information Act* applies to the Heritage Trust.
- (7) The fiscal year of the Heritage Trust ends on March 31.

Property of the Heritage Trust

- 31 (1) Property acquired by the Heritage Trust under this Part is the property of the government and title to the property may vest in the name of the government or in the name of the Heritage Trust.
- (2) Despite the *Land Act*, property acquired by the Heritage Trust under this Part may be dealt with by the Heritage Trust under this Act.
- (3) Property vested in the Heritage Trust is exempt from taxation, levies and all other charges, except to the extent that the government is liable.

PART 4 – GENERAL PROVISIONS**Notice of heritage status on land title**

- 32 (1) The minister must file a written notice in the land title office with respect to land that is designated under section 9.
- (2) The minister may file a written notice in the land title office with respect to land
- (a) for which a notice has been given under section 10 (1),
 - (b) that, in the opinion of the minister, is protected under section 13 (2),
 - (c) for which an order is in effect under section 14, 16 or 21, or
 - (d) that, in the opinion of the minister, has been altered in contravention of section 13 (2).
- (3) On receipt of a notice under subsection (1) or (2) in which the affected land is described sufficiently to be identified in the records of the land title office, the registrar must make a note of the filing on the title of the land.
- (4) If the basis on which notice was filed under subsection (1) or (2) no longer applies to the land, the minister must notify the land title office.
- (5) On receipt of a notice under subsection (4), the registrar must cancel the note made under subsection (1) or (2).
- (6) Notification to the land title office under subsections (1), (2) or (4) must be made in a form satisfactory to the registrar of the land title district.
- (7) The protection of property under this Act is not affected by
- (a) an error or omission in a notice given by the minister to the registrar,
 - (b) an error or omission in a note made by the registrar under this section, or
 - (c) a failure by the registrar to make or cancel a note on a land title.
- (8) In the event of any omission, mistake or misfeasance by the registrar or the staff of the registrar in relation to the making or cancelling of a note under this section,
- (a) the registrar is not liable nor is the government vicariously liable, and
 - (b) the assurance fund or the Attorney General as a nominal defendant is not liable under Part 20 of the *Land Title Act*.

Service of documents

- 33 (1) Where this Act requires service of a document on a person, other than service in relation to a court application under section 19, the document is sufficiently served on a person if
- (a) it is served personally on the person,
 - (b) it is sent by registered mail, or a method of delivery that provides proof of delivery, to the person's actual or last known address, or

- (c) in the circumstances described in subsection (2), it is published in accordance with that subsection.
- (2) If a document cannot be served personally on a person and the person's actual or last known address cannot be determined after reasonable steps for the purpose have been taken, the document may be served by publishing a notice in the prescribed form in 2 issues, at least one week apart, of a newspaper having general circulation
- (a) in the area where the person to be served was last known to reside or carry on business according to the information available to the person serving the document, or
 - (b) in the area in which the land is situated if the document relates to land owned by the person to be served.
- (3) A document served under subsection (1) (b) is deemed to be received on the earlier of
- (a) the date the person to whom it is sent actually receives the document, and
 - (b) the expiry of 10 days after the date on which the document was sent.

Civil remedies respecting contraventions

- 34 (1) The minister may apply to the Supreme Court for an injunction restraining a person from committing, or continuing to commit, a contravention of this Act or the regulations.
- (2) The minister may apply to the Supreme Court for a restoration or compliance order if a person
- (a) fails to comply with or contravenes the requirements or conditions of a permit issued under section 12 or 14,
 - (b) fails to comply with or contravenes an order made under section 14 or 21,
 - (c) removes property, or attempts to remove property, from British Columbia in contravention of section 13 (1),
 - (d) moves, removes, damages, desecrates, alters, excavates or digs in property, or removes objects from property in contravention of section 13 (2), or
 - (e) contravenes a regulation made under section 23 (2) or 37 (2) (e).
- (3) An order of the court in respect of an application under subsection (2) may include one or more of the following:
- (a) a requirement that the person restore the property to which the matter relates to its condition before the contravention on terms and conditions the court specifies;
 - (b) a requirement that the person undertake, as the court considers appropriate, compensatory conservation work on the property that was affected or on other heritage property, or that conservation work be performed by others at the expense of that person;

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- (c) an authorization that the minister may undertake conservation work at the expense of the person;
- (d) any other requirements the court considers advisable.
- (4) This section applies whether or not a person is charged with an offence under this Act.

Indemnity

- 35 (1) Except as provided in section 11 or 14 (9), no compensation is payable to a person for any loss or damage, or for any reduction in the value of property, that results from the operation of this Act, the performance in good faith of any duty under this Act or the exercise in good faith of any power under this Act.
- (2) An action for damages must not be brought against the minister, an employee of the government, the Heritage Trust, a director, officer or employee of the Heritage Trust, a member of a committee established or authorized under section 22 or a person who is subject to the direction of the minister or the board of directors of the Heritage Trust, because of anything done or omitted to be done in good faith in the performance or intended performance of a duty or in the exercise or intended exercise of a power under this Act or the regulations.
- (3) Subsection (2) does not absolve the government from vicarious liability for an act or omission of a person referred to in that subsection for which an act or omission the government would be vicariously liable if the subsection were not in force.

Offence and penalty

- 36 (1) A person who does any of the following commits an offence:
- (a) contravenes section 13 (6), 14 (1) or (8) or a provision of the *Park Act* referred to in section 23 (2) as it applies to a Provincial heritage property;
 - (b) fails to comply with or contravenes a requirement or condition of an order or permit under section 12 (2) (a), 14 (2) or (4), 16, 19 (2), 23 (2) or 34 (3);
 - (c) contravenes a regulation made under section 23 (2) or 37 (2) (e);
 - (d) contravenes section 13 (1) or (2).
- (2) A person convicted of an offence under subsection (1) (a) to (c) is liable to a fine of not more than \$2 000 or to imprisonment for a term of not more than 6 months or to both.
- (3) A person convicted of an offence under subsection (1) (d) is liable,
- (a) if the person is an individual, to a fine of not more than \$50 000 or to imprisonment for a term of not more than 2 years or to both, or
 - (b) if the person is a corporation, to a fine of not more than \$1 000 000.
- (4) If a corporation commits an offence under this Act, an employee, officer, director or agent of the corporation who authorized, permitted or acquiesced in the offence also commits the offence and is liable,

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- (a) if it is an offence under subsection (1) (a) to (c), to the penalty set out in subsection (2), or
- (b) if it is an offence under subsection (1) (d), to the penalty set out in subsection (3) (a).
- (5) Section 5 of the *Offence Act* does not apply to this Act or the regulations.

Power to make regulations

- 37 (1) The Lieutenant Governor in Council may make regulations referred to in section 41 of the *Interpretation Act*.
- (2) Without limiting subsection (1), the Lieutenant Governor in Council may make regulations as follows:
- (a) respecting the form, content and manner of giving notice in relation to this Act;
 - (b) respecting the form, content and manner of giving information for registration in the Provincial heritage register under section 3;
 - (c) respecting the administration and conservation of Provincial heritage properties;
 - (d) prescribing fees for a service, or for use of or admission to a facility, under this Act;
 - (e) respecting the maintenance of order at Provincial heritage properties;
 - (f) respecting heritage property that may be recorded in the Provincial heritage register under section 3 (1) (f);
 - (g) prescribing persons entitled to notice under section 10 (1) (c);
 - (h) prescribing the manner in which a notice of designation under section 10 (6) (b) is to be filed in the personal property registry;
 - (i) respecting the conduct of a heritage inspection or heritage investigation under section 14.

Continuation of former designations

- 38 (1) In this section, "**former Act**" means
- (a) the *Archaeological and Historic Sites Protection Act*, S.B.C. 1972, c. 4,
 - (b) the *Archaeological and Historic Sites Protection Act*, R.S.B.C. 1960, c. 15, or
 - (c) the *Historic Objects Preservation Act*, R.S.B.C. 1948, c. 145.
- (2) All heritage designations made under a former Act that have not been rescinded are continued as if they were designated by the Lieutenant Governor in Council under section 9, but a continuance under this subsection does not entitle any person to compensation under section 11.

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Appendix C

Recommended Qualifications for Professional Archaeological Consultants

Recommended Qualifications for Professional Archaeological Consultants

The following recommended provisions are intended to ensure the professional treatment of archaeological resources as outlined in the *British Columbia Archaeological Impact Assessment Guidelines*. These provisions apply to all persons responsible for coordinating, directing or reporting archaeological impact assessment and management studies. These recommendations are designed to be flexible and qualifications should be reviewed on a case by case basis.

- MA in archaeology or anthropology with a specialty in archaeology, or BA with an equivalent combination of post-graduate training and experience.
- must be eligible to hold an archaeological permit in B.C.
- demonstrated ability to design and conduct archaeological research, and to complete a final report in a timely manner.
- compliance with all conditions of previous permits or ministerial orders.
- access to facilities necessary to carry out field work, analysis and report preparation.
- access to the services of related specialists such as faunal and floral analysis, geomorphologists and pedologists when required.
- can serve as a repository for the proper curation of recovered cultural materials, or establish a satisfactory arrangement with such a repository.

Appendix D

Checklist of Criteria for Pre-Contact Site Evaluation

Checklist for Criteria for Pre-Contact Site Evaluation

Scientific Significance

- (a) Does the site contain evidence which may substantively enhance understanding of culture history, culture process, and other aspects of local and regional prehistory?
 - internal stratification and depth
 - chronologically sensitive cultural items
 - materials for absolute dating
 - association with ancient landforms
 - quantity and variety of tool type
 - distinct intra-site activity areas
 - tool types indicative of specific socio-economic or religious activity
 - cultural features such as burials, dwellings, hearths, etc.
 - diagnostic faunal and floral remains
 - exotic cultural items and materials
 - uniqueness or representativeness of the site
 - integrity of the site
- (b) Does the site contain evidence which may be used for experimentation aimed at improving archaeological methods and techniques?
 - monitoring impacts from artificial or natural agents
 - site preservation or conservation experiments
 - data recovery experiments
 - sampling experiments
 - intra-site spatial analysis
- (c) Does the site contain evidence which can make important contributions to paleoenvironmental studies?
 - topographical, geomorphological context
 - depositional character
 - diagnostic faunal, floral data
- (d) Does the site contain evidence which can contribute to other scientific disciplines such as hydrology, geomorphology, pedology, meteorology, zoology, botany, forensic medicine, and environmental hazards research, or to industry including forestry and commercial fisheries?

Public Significance

- (a) Does the site have potential for public use in an interpretive, educational or recreational capacity?
 - integrity of the site
 - technical and economic feasibility of restoration and development for public use
 - visibility of cultural features and their ability to be easily interpreted
 - accessibility to the public
 - opportunities for protection against vandalism
 - representativeness and uniqueness of the site
 - aesthetics of the local setting
 - proximity to established recreation areas
 - present and potential land use
 - land ownership and administration
 - legal and jurisdictional status
 - local community attitude toward development
- (b) Does the site receive visitation or use by tourists, local residents or school groups?

Ethnic Significance

- (a) Does the site presently have traditional, social or religious importance to a particular group or community?

Economic Significance

- (a) What value of user-benefits may be placed on the site?
 - visitors' willingness-to-pay
 - visitors' travel costs

Appendix E

Checklist of Criteria for Post-Contact Site Evaluation

Checklist of Criteria for Post-Contact Site Evaluation

Scientific Significance

- (a) Does the site contain evidence which may substantively enhance understanding of historic patterns of settlement and land use in a particular locality, regional or larger area?
- (b) Does the site contain evidence which can make important contributions to other scientific disciplines or industry?

Historic Significance

- (a) Is the site associated with the early exploration, settlement, land use, or other aspect of British Columbia's cultural development?
- (b) Is the site associated with the life or activities of a particular historic figure, group, organization, or institution that has made a significant contribution to, or impact on, the community, province or nation?
- (c) Is the site associated with a particular historic event whether cultural, economic, military, religious, social or political that has made a significant contribution to, or impact on, the community, province or nation?
- (d) Is the site associated with a traditional recurring event in the history of the community, province, or nation, such as an annual celebration?

Public Significance

- (a) Does the site have potential for public use in an interpretive, educational or recreational capacity?
 - visibility and accessibility to the public
 - ability of the site to be easily interpreted
 - opportunities for protection against vandalism
 - economic and engineering feasibility of reconstruction, restoration and maintenance
 - representativeness and uniqueness of the site
 - proximity to established recreation areas
 - compatibility with surrounding zoning regulations or land use
 - land ownership and administration
 - local community attitude toward site preservation, development or destruction
 - present use of site
- (b) Does the site receive visitation or use by tourists, local residents or school groups?

Ethnic Significance

- (a) Does the site presently have traditional, social or religious importance to a particular group or community?

Economic Significance

- (a) What value of user-benefits may be placed on the site?
 - visitors' willingness-to-pay
 - visitors' travel costs

Integrity and Condition

- (a) Does the site occupy its original location?
- (b) Has the site undergone structural alterations? If so, to what degree has the site maintained its original structure?
- (c) Does the original site retain most of its original materials?
- (d) Has the site been disturbed by either natural or artificial means?

Other

- (a) Is the site a commonly acknowledged landmark?
- (b) Does, or could, the site contribute to a sense of continuity or identity either alone or in conjunction with similar sites in the vicinity?
- (c) Is the site a good typical example of an early structure or device commonly used for a specific purpose throughout an area or period of time?
- (d) Is the site representative of a particular architectural style or pattern?

Appendix F

Indicators for Assessing Impacts on Archaeological Sites

Indicators for Assessing Impacts on Archaeological Sites

| | |
|-------------------|---|
| Magnitude | The amount of physical alteration or destruction which can be expected. The resultant loss of archaeological value is measured either in amount or degree of disturbance. |
| Severity | The irreversibility of an impact. Adverse impacts which result in a totally irreversible and irretrievable loss of archaeological value are of the highest severity. |
| Duration | The length of time an adverse impact persists. Impacts may have short-term or temporary effects, or conversely, more persistent, long-term effects on archaeological sites. |
| Range | The spatial distribution, whether widespread or site-specific, of an adverse impact. |
| Frequency | The number of times an impact can be expected. For example, an adverse impact of variable magnitude and severity may occur only once. An impact such as that resulting from cultivation may be of recurring or ongoing nature. |
| Diversity | The number of different kinds of project-related actions expected to affect an archaeological site. |
| Cumulative Effect | A progressive alteration or destruction of a site owing to the repetitive nature of one or more impacts. |
| Rate of Change | The rate at which an impact will effectively alter the integrity or physical condition of an archaeological site. Although an important level-of-effect indicator, it is often difficult to estimate. Rate of change is normally assessed during or following project construction. |

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