

Chance Find Management Procedure for Proposed Riverbank Improvements on the Queensborough Dyke, New Westminster, BC

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Key Contacts

In the case of a chance archaeological find, please attempt to contact the Project Archaeologist first, then additional contacts if the archaeologist is not immediately available:

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Disclaimer:

- This CFMP is not meant to be used in lieu of an archaeological assessment. Chance Finds Management Procedures are not useful unless site personnel are adequately trained in the identification of archaeological resources.
- Chance Find Management Procedures are most effective when Project personnel involved with ground disturbance receive training so they understand the implications of unanticipated archaeological site impacts, how to report and manage chance finds, and what to look for. The Chance Find Management Procedure is also most effective when reviewed regularly (e.g., at regular tailgate meetings). On-site presentation of these guidelines is necessary for all staff performing ground disturbance. The Chance Finds Management Procedure must be presented to staff who are absent from the original presentation.
- These guidelines are intended to be presented by a Project Archaeologist in collaboration with involved First Nations.

1.0 Introduction

Kleanza Consulting Ltd. (Kleanza) has prepared this Chance Find Management Procedure (CFMP) for Advisian (the Client), for the proposed riverbank improvements on Queensborough Dyke, in New Westminster, BC (the Project). The Project area is situated on the eastern end of Lulu Island, on municipal lands, along the border of the City of Richmond and the City of New Westminster. It is immediately north of the northern terminus of Boundary Road.

The protocols in this document should be followed if suspected archaeological materials are identified by site personnel in the absence of a qualified archaeologist. The purpose is to aid in archaeological site documentation and management. Information on how to identify common types of archaeological materials is provided. The document describes STOP WORK procedures and explains when and how to contact the appropriate authorities. All personnel working in the Project area should review and follow the procedures outlined in this document.

As indicated in the First Nations Statement of Intent Boundaries, published by the Ministry of Forests, the Project area is within the consultive areas of Seabird Island Band, Stó:lō Nation, Stó:lō Tribal Council, Shxw'ow'hamel First Nation, Skawahlook First Nation, Soowahlie First Nation, Semiahmoo First Nation, scəw' aθən məsteyəx (Tsawwassen First Nation), x^wməθk^wəyəm (Musqueam Indian Band), səlilwətəł (Tsleil-Waututh Nation), Kwantlen First Nation, Katzie First Nation, and K^wik^wəłəm (Kwikwetlem First Nation).

1.1 Objectives

This CFMP aims to promote the management of archaeological sites while minimizing the disruption of development scheduling. Therefore, this document should be

reviewed by all personnel and subcontractors working on-site **prior** to the commencement of construction. If followed, this procedure will inform all personnel and subcontractors involved in construction activities that:

- heritage resources are protected by law on provincial lands;
- any archaeological materials or human/ancestral remains encountered during construction must be reported immediately; and,
- a STOP WORK procedure must be implemented right away should any artifacts/belongings or remains be encountered.

1.2 Relevant Legislation

Archaeological sites are the physical remains of past human activity. In BC, all archaeological sites are protected by the *Heritage Conservation Act (HCA 1996)*, on provincial Crown or private lands. Sites that have been designated by the Archaeology Branch, Ministry of Forests include those that predate AD 1846, heritage wrecks (vessels or aircraft) abandoned for two or more years, and burial or rock art sites which are protected regardless of age. Protected archaeological sites can only be altered under a Section 12.4 Site Alteration Permit issued by the Archaeology Branch.

The majority of the province has not yet been surveyed for archaeological sites; thus, most archaeological sites have not been recorded. **The HCA provides substantial penalties for the destruction or unauthorized disturbance of archaeological sites including imprisonment for up to two years and fines of up to \$1,000,000.**

1.3 Potential Impacts to Archaeological Sites

Development activities have the potential to impact archaeological and cultural materials. Land-alterations within the Project area have the potential to negatively impact archaeological and cultural materials. Development land-alterations will or may include tree and vegetation removal, excavation, dredging, pile removal, grading, overfilling, and installation or rip rap. Ground disturbance may also occur from foot traffic and the movement of heavy machinery.

Since no archaeological materials, features, or potentially cultural-bearing natural sediments were identified within the Project area during this AIA study, it is surmised that Project area has low archaeological site potential. As a result, no adverse impacts to pre-contact period heritage resources are anticipated.

The Project area was initially considered to have moderate to high archaeological potential due to its location on the banks of the Fraser River, relative proximity to two previously recorded archaeological sites, and level ground. Analysis of aerial photography indicated that the Project area was situated on a highly disturbed, artificially constructed landform that has a low likelihood to contain intact archaeological deposits. The expectations derived from this analysis were corroborated by our survey and subsurface testing program results. Our findings do not negate the conclusion that First Nations used this area in the past.

According to the Provincial Heritage Registry, no previously recorded archaeological sites are situated within 1 km of the Project area. According to RAAD, two registered archaeological sites (DhRt-73 and DhRt-470) are located within 3 km of the project area. Therefore, no previously recorded archaeological sites are located within the development impact zone of the Project area itself.

1.4 First Nations Heritage Management Plans

First Nations in BC have a long and complex history dating back at least 14,000 years. Much of this history was not documented using written records like in other parts of the world. Instead, rich oral traditions and archaeological remains record the history of BC and the people who have populated it for millennia. These sources show that the First Nations had elaborate social structures, cultural practices, economies, laws, and material cultures.

According to British Columbia's Archaeology Branch, archaeological sites, along with oral traditions, are "the only vestiges of a rich history, and protecting and conserving this fragile legacy and non-renewable natural resource is valuable to First Nations, local communities and the general public" (BC Archaeology Branch 2020). In particular, archaeological sites hold importance to BC's First Nations in that they demonstrate continued land use over time. The people who occupied this area 14,000 years ago are not gone — they still collect traditional foods and materials, still own land and water according to their laws, and still record and tell their own histories. Archaeology is a valuable tool in helping to record and tell that history.

The majority of the recorded archaeological sites in BC are Indigenous in origin, and First Nations communities have special rights and responsibilities as caretakers of that inheritance. Some First Nations in BC have developed their own formal heritage management policies and plans in response to observed shortfalls in the *HCA*, in relation to community heritage interests and values. As the *HCA* does not extend to federal lands (such as reserves), heritage management plans can provide direction for managing heritage resources in the absence of federal heritage legislation and guidance.

An important part of First Nations heritage management plans is the issuance and management of First Nations heritage inspection permits. Obtaining these permits is a critical part of informing First Nations groups of work being conducted within their traditional territory, allowing them an opportunity to provide feedback on aspects of the work and the reporting, and allowing them a chance to participate in the fieldwork.

2.0 Archaeological and Cultural Site Types

Archaeological sites consist of artifacts/belongings, features, and other physical evidence of human habitation in the past. Often, artifacts/belongings on the ground

surface are the clearest indicator that an archaeological site is present, especially to those not trained in the identification of archaeological sites.

For the purpose of this CFMP, archaeological and cultural site types have been organized under the eight site types expected within the Project area:

- Lithic artifacts/belongings and debitage
- Bone, shell, and antler artifacts/belongings
- Burials
- Wet sites
- Subsurface archaeological deposits
- Traditional Use Sites
- Spiritual Sites
- Historical materials and sites

2.1 Lithic artifacts and debitage

Stone tools, or lithics, are the most common type of artifact/belonging in BC. Stone was one of the primary materials used by Indigenous peoples to craft tools, ornaments, and other objects. Lithics are broadly divided into two categories:

- **Flaked artifacts** were carefully chipped to form sharp-edged tools like knives and projectile points (arrowheads or spear points). Raw materials include obsidian, chert, and quartz (Figure 1).
- **Groundstone artifacts** were pecked and ground smooth to form tools like axes and adze blades, or ceremonial objects like mauls. They were made from a variety of raw materials, including dacite, quartzite, slate, sandstone, and nephrite (Figure 2).

Lithic artifacts/belongings also include the waste materials produced as a result of forming stone tools, known as **lithic debitage** or **flakes** (Figure 3). Lithics may also be found in collections of two or more pieces, called **lithic scatters**. These collections represent a place where stone tools were made. Be aware of concentrations of stone not native to the area, such as obsidian (Figure 4) and chert, both types of rock that break with a glass-like fracture pattern.



Figure 1. Flaked stone spear points made from basalt and chert.



Figure 2. Groundstone adze blades made from a variety of materials.



Figure 3. Stone flakes, made out of basalt (the matte, grey-black stone), recovered during the 2019 AIA at Iona Island.

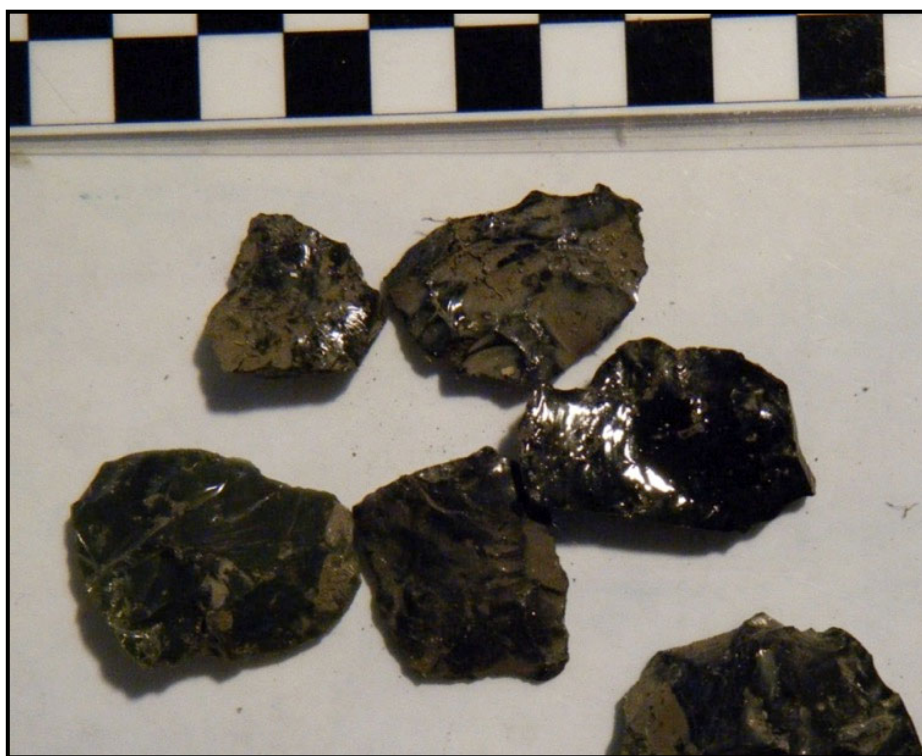


Figure 4. Obsidian flakes — note the glass-like appearance. Obsidian is commonly black or grey but can also have red or green colouration.

Fire-cracked rock (FCR) is any rock that has been reddened, burnt, or split from the intense heat of a cooking fire. The presence of FCR indicates a hearth and possibly a

settlement (Figure 5). There are two known surface lithics sites nearby DhRr-73 and DhRr-470.



Figure 5. Fire-cracked rock (FCR).

2.2 Bone, shell, and antler artifacts

Another important raw material category includes organic artifacts/belongings made from bone, shell, and antler. While none of these materials preserve as well as stone in the archaeological record, they are often present in significant quantities at long-term habitations sites like villages.

Bone artifacts/belongings may include a variety of tools made out of worked bone, such as needles, knives, points, awls and scrapers (Figures 6 and 7). This class of material includes processed and unprocessed animal bones, or faunal artifacts/belongings. Typical faunal artifacts/belongings include fishing hooks, and harpoons, awls, needles, and other items for which animal bone was the perfect carving medium. Sometimes, bones are found that have not been shaped into tools, but show evidence of cutting, butchering, or burning by humans. Cooked or burned bone preserves much better than uncooked or unburned bone. Unprocessed faunal material may include land or sea mammals, fish, and bird specimens.

A wide variety of tools and ornaments were produced using marine shell. Shell artifacts/belongings very often include beads and pendants. Types of shell artifacts may include, but are not limited to scrapers, cutting implements or ornamentation (Figure 8).



Figure 6. Worked bone artifacts.



Figure 7. Bone, claw, and tooth artifacts.



Figure 8. A collection of shell beads.

2.3 Burials

Any physical ancestral human remains, rectangular depressions or whole or fragmented cedar box remnants may be an indication of a burial site. Cremations may be represented by dense concentrations of charcoal, ash and fire-altered rock.

Ancestral Human Remains: If ancestral remains or indicators of human remains (such as rectangular depressions, rock cairns, or cremations that may be represented by dense concentrations of charcoal, ash and fire-cracked rock) are found, all work **MUST STOP** and Project personnel must contact a qualified archaeologist who will assess the find and contact the Archaeology Branch, client, and involved First Nation agencies where appropriate. If obvious recent human remains are identified, the Police and coroner should be contacted directly. Respect is paramount when dealing with Ancestral Remains or other burial features — they should be shown the proper respect and dignity owed to any human being, living or deceased.

2.4 Waterlogged, well-preserved archaeological deposits (wet sites)

Most of the material items used by First Nations people of BC in the past were made of materials that typically degrade and perish in archaeological settings. Artifacts/belongings made of organic materials such as hardwood, softwood, bark, roots, and even hair and fur typically only preserve in oxygen-free environments that exist in the water-saturated soils below the water table. In these environments, the lack of oxygen inhibits the growth of bacteria and fungi that feed on the organic

materials. These sites are rare and typically occur in wetlands, floodplains, intertidal setting, marshes, deltas, rivers, creeks, and bogs.

The types of artifacts/belongings that may be encountered in a wet site include worked wood, worked bark, bark weaving, root weaving, clothing, cordage, ceremonial artifacts/belongings, and wood detritus from fishing weirs, fish hooks, and others (Figures 9 and 10).



Figure 9. Example of a woven bark artifact (left) and cordage (right).



Figure 10. Remains of fish trap in Burrard Inlet

2.5 Subsurface archaeological deposits

Archaeological sites often contain distinct horizontal layers of cultural deposits that represent activities people were engaged in at different periods of time. These include buried ground-surfaces that show evidence of being heavily used in the past, such as house-floors, occupation areas and activity areas, such as hearth features. These types of cultural deposits can all be identified by a linear subsurface concentration charcoal, fire-reddened soil (Figure 11), rich layers of organic material and/or fire-cracked

rock. Subsurface cultural deposits may also include cultural shell deposits (midden), subsurface lithics, or other features such as cultural depressions, hearths, and partial structures.



Figure 11. Example of subsurface cultural layer. Note the band of fire-reddened soil.

Another type of distinct strata is cultural shell deposit (Figures 12 and 13). Cultural shell deposit is characterized by the presence of fragmented or whole shell suspended in dark brown greasy organic-rich matrix, which commonly contain charcoal, ash, fire cracked rock and burnt sediments, as well as stone, bone, shell and antler artifacts/belongings. Cultural shell deposit deposits vary from small pockets to very large sites several hundred meters square and are usually, but not always, found along or near the shoreline. Cultural shell deposits can also be very fine and at times hard to discern from the surrounding sediments, as shown in Figure 13. There were cultural shell deposits recovered nearby at site DhRr-470.



Figure 12. Example of cultural shell deposit and associated organic material, indicated by black, greasy sediment and thick, sharp shell deposits.



Figure 13. Example of fine cultural shell deposit and faunal remains in river sand, indicated by small, sharp shell fragments.

2.6 Traditional Use Sites

Traditional use sites are the tangible (physical) and intangible (non-physical) components of land and water use by First Nations, including objects, places, traditions, culture, history, structures, processes, events, conceptual, oral, and behavioural traditions. These sites are typically non-archaeological (as designated by the Province of BC, post-1846) cultural heritage sites that relate to a traditional societal practice, and include important resource gathering areas, sites of spiritual or historical significance, culturally modified trees, or ceremonial sites.

Cultural values may include not only the sites themselves, but also the things that connect these areas together — trails, legends, wildlife movements, or rivers. Traditional use sites in BC are not currently protected under the *HCA*, though they may have significance for local First Nations communities.

These site types may be hard to recognize in the field. However, developing an understanding of traditional use sites particular to the Project area, as determined in discussions with the First Nations liaison and local communities will help build an awareness to cultural resources that may not initially be apparent. Often local First Nations have resources citing traditionally significant named places for archaeologists to utilize prior to survey (Figure 14). If any of these significant named places overlap with the Project area, archaeologists will discuss this with the local First Nations in order to fully understand the significance of the site and the possible traditional site types they may encounter there.



Figure 14. Some traditional use sites are difficult to spot. They may be areas where a particular resource is abundant, such as plant or berry-picking areas

Some traditional use areas are locations where local First Nations conducted and continue to conduct culturally significant spiritual practices. These areas generally

are not mapped and are not available to the public, even to archaeologists. This is one of the many reasons why it is so important for archaeologists and First Nations to work closely together, as these areas of significance can then be discussed prior to project commencement. Proper planning and acknowledgement of these highly culturally significant areas ensures the proper procedures, protocols, and members of the local First Nation are involved, and the area is treated with the utmost respect by archaeologists and all on-site project personnel.

2.7 Spiritually significant sites

In addition to resources procurement sites, the local First Nations have countless spiritual sites situated throughout the Lower Mainland. These sites include but are not limited to, transformer stones, spiritual bathing sites, burial sites, and other tangible and intangible named places. As these places are very culturally significant, some of these locations are not shared with the public to ensure that these places remain protected. It has been communicated to Kleanza by multiple First Nation agencies that burials, in particular, are highly significant, as it is believed that the ancestors remain at their burial location, making these places highly spiritual as well as being physically visible.

2.8 Historical materials and sites

This class of material includes historical (post-1846) structures, ceramics, wooden artifacts, metal artifacts, glass, trap boxes, historical structures, furnishings, clothing, and buttons, among others (Figure 15). Post-1846 materials are typically not protected under the *HCA* but may be protected by federal or municipal legislation.



Figure 15. Partial glass bottle (top left); metal door hinge (bottom left); glass telegraph insulator (center); ceramic/stoneware bowl (top right); tin can lid, embossed (bottom right).

3.0 Archaeological Chance Find Procedures

If personnel involved in Project construction activities believe they have encountered potential archaeological materials, features, or human remains they should **STOP WORK** in the vicinity of the find and follow the procedures outlined below:

- 1) **STOP** all construction activities in the vicinity (within 10 metres) of the archaeological find immediately.
- 2) Contact your site foreman or supervisor immediately and have them contact Advisian and the Kleanza Project archaeologist immediately.
- 3) Accurately record the locations of the find, using a GPS or smartphone if available. Ask your supervisor to take a photo of the find (with a hardhat, glove, or other object as a scale reference). Mark the location clearly, using flagging tape if possible. **Do not move** archaeological materials/remains unless it is in immediate danger. Leave all archaeological materials and remains in place until the Project archaeologist can assess the find.
- 4) Kleanza will assess the potential significance of the archaeological find and mitigative options will be identified accordingly.
- 5) If the significance of the archaeological materials warrants further mitigative action, and avoidance is not possible, Kleanza will consult with the Archaeology Branch and First Nations representatives to determine the appropriate course of action.
- 6) If human remains are found, the archaeologist will contact the [local police force (e.g., local RCMP detachment or city's Police) and local Coroner's Office immediately (as per Archaeology Branch guidelines). If the coroner assesses the remains to be archaeological and not of forensic concern, the Archaeology Branch and First Nation will be consulted to determine how to handle them. Options may include avoidance or respectful removal and reburial.
- 7) Kleanza will inform the Project lead when work may recommence in the vicinity of the find. And/or Kleanza will inform the Project lead and all involved First Nations of any mitigative measures to be taken, if necessary.

4.0 References

- 1996 *Heritage Conservation Act*, RSBC. C. 187. BC Archaeology Branch
2020 Archaeology in BC <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology>

City of Vancouver Archive

- 1888 Photograph of the Wreck of the SS "Beaver" on rocks of Observation Point (now Prospect Point). Item: LP 329. Reference: AM54-S4-: LP 329.