# MAPPING AND SHAPEFILE REQUIREMENTS

# INTRODUCTION

The purpose of this document is to describe the requirements for all maps and shapefiles submitted to the Archaeology Branch. The intention of these requirements is as follows:

- to standardize requirements for common applicability to all *Heritage Conservation Act* (HCA) permits;
- to achieve consistency in the way sites are mapped in the Provincial Heritage Register (PHR);
- to eliminate duplication of effort and variability of mapping requirements between the Inventory and Permitting and Assessment sections of the Archaeology Branch.

All maps and shapefiles submitted to the Archaeology Branch must meet the requirements outlined in this document. The following table lists which maps and shapefiles are required by the Permitting and Assessment section and the Inventory section.

| | **Permitting and Assessment Requirements** | | | **Inventory Requirements** |
|---|---|---|---|---|
| **Deliverables by Phase** | Application Phase | Notification Phase (see Bulletin 25 for more information) | Reporting Phase | Site Record Submission Phase *(submit when appropriate, based on permit requirements)* |
| Permit Area Overview Map | ✓ | | ✓ | |
| General Location Map | | ✓ | | |
| Midrange Location Map | ✓ | | ✓ | ✓ |
| Detailed Development Map | ✓ | | ✓ | |
| Detailed Results Map | *May be required for S.12 applications* | | ✓ | |
| Detailed Site Map | ✓ | | ✓ | ✓ |
| Permit Area Shapefiles | *Required for S.14 applications only* | | | |
| Study Area Shapefiles | | ✓ | ✓ See *Study Area Submission Requirements* | |
| Site Boundary Shapefiles | | | | ✓ |

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# BASIC REQUIREMENTS FOR ALL MAPS

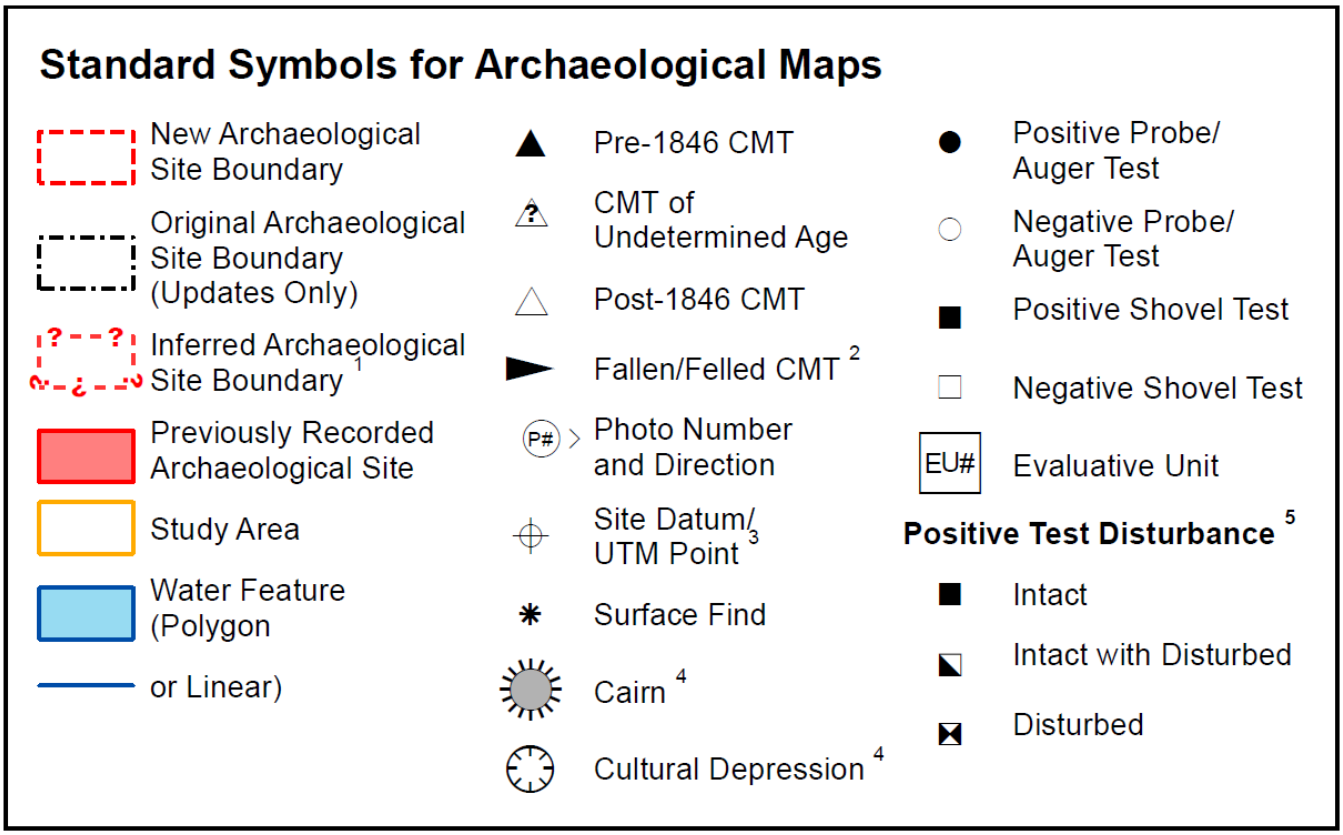
## STANDARD MAP ELEMENTS AND ATTRIBUTES

All mapping submitted to the Archaeology Branch will include the following map elements and attributes.

| | |
|---|---|
| *Title Block* | All maps must include a discrete title block with space for the following information:<br>✓ Map title (be specific)<br>✓ Map/Figure number<br>✓ Temporary site number (site-specific maps only)<br>✓ Borden number (site-specific maps only; leave blank if BN not yet assigned)<br>✓ Your company/affiliation (name or logo)<br>✓ Permit number (if permitted)<br>✓ Base map source and date<br>✓ Date (for site-specific maps this is the date of mapping in the field)<br>For reporting purposes, you may omit information from the title block that is already included in the page header, footer, or caption. |
| *Proprietary Data Block (optional)* | Some archaeological consulting companies require the inclusion of additional data on their maps (*e.g.*, map versioning, drawn by, project number). This data may be included on the map but must be contained within a discrete data block. |
| *Legend Block* | Include a discrete legend block that identifies *all* symbols used on the map. Do not include symbols in the legend that are absent from the map. Long lists of inapplicable symbols from client-sourced development maps or other base mapping will not be accepted. See *Mapping Symbology* section for additional requirements. |
| *Landmark Labels* | Clearly label significant landmarks (*e.g.*, roads, rivers). All landmarks mentioned in a site form or report must be labelled on the associated maps. Non-archaeological trails must be descriptively labelled (e.g., recreation trail, game trail, quad trail). |
| *North Arrow* | Include a north arrow to indicate true north. The north arrow must always point to the top of the page; landscape and portrait orientations are both acceptable, with the "top" being the upper edge of the page when page is oriented for reading. |
| *Bar Scale and Scale Ratio* | Include a bar scale inside the map area for all maps and map insets. Label the bar scale with the scale ratio in centimeters to meters (*e.g.*, 1:5000). Scale must be rounded to the nearest 100 m (*e.g.*, 1:100, 1:700, 1:6500). Odd-numbered scales will not be accepted (*e.g.*, 1:143, 1:727, 1:6591). To avoid possible confusion when a map is reproduced (digitally or in print) at a size other than 100% of the original you may choose to indicate the original document size next to the scale ratio in parentheses (i.e. "Created for 8.5 x 11 inch format"). |
| *UTM Grid (optional)* | A UTM grid may be included along the edge of the map area. A UTM grid is highly recommended for all non-urban areas. A UTM grid does not replace a UTM point/datum on the detailed site map. |
| *Digitized* | All maps must be digitized. Hand-drawn sketches will not be accepted. |

| | |
|---|---|
| *Clear and Legible* | Shading and colour coding must retain significance and legibility when printed in black and white. Maps that are difficult to read or interpret will not be accepted. |
| *Page Size Restrictions* | Full-page maps are required. Letter size (8 ½ x 11") is required in most cases. Legal size (8 ½" x 14") and tabloid size (11" x 17") will be accepted only for illustrating large or complex areas where letter size is impractical. Maps of large sites or areas may be divided onto separate pages; include match lines or an additional map showing the division lines. |
| *Digital File Size* | For data sharing, printing, and storage purposes, keep digital file size as low as possible by using a resolution no higher than necessary to produce a crisp map. File size and resolution must be addressed at the drafting stage. Maps that are fuzzy because their resolution was reduced after drafting will not be accepted. |
| *Final Copy Only* | Submit a final copy of the map only. DRAFT maps will not be accepted. |

All maps submitted to the Archaeology Branch will use the following standard symbols for the features listed.




1 Use an inferred boundary for uninvestigated areas where site has not been observed but is assumed to continue; inferred boundaries are usually applied beyond an arbitrary site boundary; not to be included as part of the actual site boundary and associated shapefile.

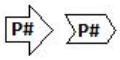
2 Adjust fallen/felled CMT symbol to scale and orientation. Apply fill consistent with other CMT symbols.

3 Site datum/UTM point symbol may be omitted if the UTMs are clearly tied to another feature on the map (e.g., shovel test, CMT, surface artifact).

4 Adjust symbol to scale and orientation.

5 Symbols indicating intact/disturbed nature of positive shovel tests are required where relevant (e.g., residential development containing complex archaeological deposits); otherwise use standard positive/negative symbols.

Minor variation of the standard symbols may be allowed in order to enhance clarity or to accommodate more complex maps and the need for further differentiation of similar map features. Examples of acceptable variations include the following:

- CMT differentiation by colour: red = pre-1846, green = post-1846, yellow = undetermined.
- Custom CMT symbols to further differentiate by CMT type; acceptable as long as differentiation by date is retained.
- Custom Photo symbol that still includes photo number and direction: 

- Applying the shovel test fill scheme to EUs.
- Original archaeological site boundary outlined in red or grey instead of black, where black is obscured by a dark base map or other symbols.
- Custom symbols for features not included in the list of standard symbols (e.g., base of slope, slope direction). Mind the colour restrictions for red, blue, and green.

The following symbology and legend requirements must met for all maps:

| | |
|---|---|
| *Legend Block* | Include a discrete legend block that identifies *all* symbols used on the map. Do not include symbols in the legend that are absent from the map. Long lists of inapplicable symbols from client-sourced development maps or other base mapping will not be accepted. |
| *Test Dimensions* | The legend must indicate the size of all tests: shovel tests, probe tests, auger tests, and evaluative units.<br><br>*Examples:*<br>■ Positive Shovel Test (intact, 35 cm x 35 cm)<br>○ Negative Auger Test (10 cm diameter)<br>● Positive Probe Test (intact, 2 cm diameter)<br>EU# Evaluative Unit (1 m x 1 m) |
| *Colour Restrictions* | When customizing symbols, do NOT use the following colours for anything other than the features listed here:<br><br>• **RED**: protected sites and features, pre-1846 CMTs<br>• **BLUE**: water features, wetlands<br>• **GREEN**: historic places, post-1846 CMTs, natural/vegetated areas, parks |
| *Consistency of Symbology* | Symbols and their colours must be applied consistently across all maps within a report and its associated site forms; for example, if you use a purple line to symbolize a development boundary on one map, you must use the same purple line to symbolize development boundaries on all other maps. |
| *Survey Coverage* | Survey coverage is best represented by a transparent fill that does not obscure other map information; when applied, it should reflect the width of the survey transects. If 100% survey coverage is achieved, this can be simply stated in the report and excluded from the map. |

## PERMIT AREA OVERVIEW MAP

The purpose of this map is to illustrate the exact location of the permit area within the surrounding landscape. This map is submitted with the permit application and subsequent report(s).

| | | |
|---|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* | |
| *Scale* | Use a scale appropriate to the size of the permit area. | |
| *Base Mapping* | Use a base map that is conducive to presenting the permit area in a clear and accurate manner, such as TRIM or orthophotography (*e.g.*, Google Earth, ESRI world imagery). | |
| *Required Elements* | 1 | Use clearly labeled polygons to represent the permit area. |
| | 2 | Include development area boundaries where appropriate. For multiple development permit applications this information is not necessary unless specific developments are identified within the permit application. |
| | 3 | Include known archaeological sites within an appropriate distance of the permit area. For multiple development permits, it is unnecessary to list previously recorded sites, unless specific developments are identified within the permit application. Sites should be represented as a polygon, unless the scale is such that the red triangle symbol would be more appropriate. Only label those archaeological sites identified and/or relevant to the application.Newly recorded sites must be included on this figure with report submission. |
| | 4 | Include the potential model overlay where relevant to the permit, and ensure that the model used is identified in the legend. |
| | 5 | An inset showing the permit area location within an outline of the province of BC (show entire province or north/south half). |

## GENERAL LOCATION MAP

The purpose of this map is to illustrate the exact location of a proposed development area within the surrounding landscape under a "Blanket Permit" (i.e., a permit for multiple, as-yet to be determined developments). Per Bulletin 25, this map is submitted to First Nations and subsequent report(s); if identified at that time, it may be included in the application.

| | | |
|---|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* | |
| *Scale*<br>*1:20,000 – 1:50-000* | Use a scale that is between 1:20,000 and 1:50,000. | |
| *Base Mapping* | Use a base map that is conducive to presenting the permit area in a clear and accurate manner, such as TRIM or orthophotography (*e.g.*, Google Earth, ESRI world imagery). | |
| *Required Elements* | 1 | Use clearly labeled polygons to represent the proposed assessment area. |
| | 2 | Include development area boundaries. |
| | 3 | Include known archaeological sites within an appropriate distance of the permit area. Sites should be represented as a polygon, unless the scale is such that the red triangle symbol would be more appropriate. Newly recorded sites must be included on this figure with report submission. |
| | 4 | Include the potential model overlay where relevant to the permit, and ensure that the model used is identified in the legend. |
| | 5 | An inset showing the permit area location within an outline of the province of BC (show entire province or north/south half) and/or the development (e.g., pipelines) as appropriate. |

## MIDRANGE LOCATION MAP

The purpose of a midrange location map is to illustrate the exact location and extent of the study area and newly recorded or revisited archaeological sites within the surrounding landscape (*e.g.*, clearly labeled streets, water bodies, geographic features) so that they can be easily relocated in the field. This map is required by BOTH Inventory as part of the site form submission and by Permitting and Assessment to be included with permit applications and reporting. When submitting a site form to Inventory, include only the midrange map(s) relevant to the site (not all the midrange maps for the project).

| | | |
|---|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* | |
| *Scale*<br>*1: 5000 - 1:15,000* | Use a midrange scale that allows inclusion of distinctive topographical or cultural features without compromising too much detail. This is usually accomplished with a scale ranging between 1: 5000 and 1:15,000. A scale of 1:20,000 is usually too small. | |
| *Base Mapping* | Base mapping for midrange maps must use orthophotographic or LIDAR imagery; if the imagery is very dark, it can be lightened by applying transparency. Client-sourced development maps will not be accepted as base mapping for midrange location maps. | |
| *Required Elements* | 1 | Include and label *all* known archaeological sites that are located within the map area, including new and previously recorded sites. |
| | 2 | Site boundaries for all new and previously recorded sites must be displayed as accurately scaled polygons (not points or triangles). |
| | 3 | For revisited sites where the site boundary is being revised, midrange maps should show both the original site boundary and the new site boundary, if the scale allows. However, if the difference between original and new boundaries is too slight to perceive on the midrange map, then display only the new (revised) site boundary on the midrange map. |
| | 4 | Include all relevant administrative, study area, and development boundaries as scale allows. Cadastral (legal lot) boundaries must be shown when available. |
| | 5 | Include survey transects and general subsurface test areas as appropriate. |
| *Options* | The midrange map may be submitted as an inset on the detailed site map, as long as mapping quality has not been compromised and all other mapping requirements have been met. | |

| | |
|---|---|
| | In some circumstances, a single combined site map *may* be accepted in place of separate detailed and midrange maps, especially when zooming in/out would not provide additional useful information. Such combined maps are sometimes appropriate for isolated finds or small CMT sites and are usually around 1:4000 – 1:5000 in scale. They will only be accepted if mapping detail has not been compromised, the site location within the surrounding landscape is immediately evident, and all other mapping requirements have been met. |

## DETAILED DEVELOPMENT MAP

The purpose of this map is to illustrate the details of a small to medium sized development activity. This map is required for Section 12 alteration permits applications and subsequent reporting. The detailed development map may not be appropriate for multiple development permits where the midrange location map provides sufficient detail (applicable to both the application and reporting phases).

| | | |
|---|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* | |
| *Scale*<br>*<1:2000* | Use a scale that is generally less than 1:2,000. | |
| *Base Mapping* | Client-sourced development maps are acceptable. | |
| *Required Elements* | 1 | Site boundaries for all new and previously recorded sites must be displayed as accurately scaled polygons (not points or triangles). |
| | 2 | Identify all the project components that are discussed in the permit application and/or report. Where feasible, provide maximum depth of impact, building envelope, footprint extent, etc. |
| | 3 | Ensure the property boundaries or outline of study match the permit area overview map and the midrange location map. |
| | 4 | Clearly label significant landmarks. |

## DETAILED RESULTS MAP

The purpose this map is to illustrate an overview of survey coverage and testing results. This may require more than one map depending on size of the project and is intended to capture an overview of results that differ from detailed site maps (such as negative test areas)

| | |
|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* |
| *Scale* | Use a scale appropriate to the size of the development. |
| *Base Mapping* | Use a base map that is conducive to presenting data in a clear and accurate manner, such as TRIM or orthophotography (*e.g.*, Google Earth, ESRI world imagery). Client-sourced development maps will not be accepted as base mapping for a detailed results map if they contain superfluous information not relevant to the results. |
| *Required Elements* | Include all relevant information such as survey coverage (transects denoted on map will reflect the width of survey coverage), shovel test areas, potential model, areas of potential (AOP), as well as previously recorded and new archaeological sites. |
| *Options* | For large scale development permits where multiple shovel test areas are included, detailed results mapping of negative tests areas will not be a requirement, provided sufficient detail is included on the midrange location map and in the report. Negative data must be accounted for so the level of work completed under the study can be properly assessed. Small scale projects, such as single development properties, must include detailed results including negative testing. |

## DETAILED SITE MAP

The purpose of a detailed site map is to illustrate site-specific and project-specific details.

| | | |
|---|---|---|
| *Basic Requirements* | Consult the following sections on basic requirements for all maps:<br>• *Standard Map Elements and Attributes*<br>• *Mapping Symbology* | |
| *Scale*<br>*1:500 – 1:4000* | Use the largest possible mapping scale to accommodate as much detail as possible within the site boundary. The scale will depend on site dimensions but normally ranges between 1:500 and 1:4000. | |
| *Base Mapping* | If applying a base map, use one that is conducive to presenting archaeological data in a clear and accurate manner, such as TRIM or orthophotography (*e.g.*, Google Earth, ESRI world imagery). Client-sourced development maps will not be accepted as base mapping for a detailed archaeological site map if they contain superfluous information not relevant to the site or the project. Legal plans are often acceptable. | |
| *Required Elements* | 1 | Detailed site maps must include a datum or UTM point located within the site boundary. The datum/UTM point must be labeled directly on the map with its corresponding UTM coordinates, or the UTM coordinates included in the legend next to the datum symbol. These UTM coordinates must correspond to those provided in site forms and permit reporting. |
| | 2 | Accurately illustrate the location of all surface artifacts, archaeological features, and individual CMTs. Label them with unique identifiers that correspond to those used in all related documents (site form, tables, reports). Site form updates must clearly distinguish previously recorded, re-recorded, and newly recorded features; when referring to previously recorded features, use the same unique identifiers used by the original recorder. |
| | 3 | Accurately illustrate the location of all subsurface tests, indicating whether these tests were positive or negative for archaeological material. The symbols used for subsurface tests and evaluative units do not need to be to scale, but their actual size must be recorded in the map legend. Label all positive tests, plus negative tests mentioned in site forms and reporting, with unique identifiers that correspond to those used elsewhere in the documentation. |
| | 4 | The nearest water source must be indicated; if it is outside of the map area, then include a directional arrow labeled with the name of the water source and its distance from the site. |
| | 5 | Landforms and features used to define site boundaries must be clearly mapped. Include other nearby landforms and features, such as rivers (indicate direction of flow if relevant), lakes, vegetation cover, slope, roads, right-of-ways, pipelines, seismic lines, bridges, railway tracks, and other structures. |
| | 6 | If disturbance patterns are known, indicate which areas of the site are intact, disturbed, or subject to future disturbance. Illustrate individual surface and tree-throw exposures. Where exposures are too dense and numerous to practically illustrate, indicate the general area of disturbance and include the estimated percentage (%) of area exposed. |

| | | |
|---|---|---|
| | 7 | Include *all* known archaeological sites that are located within the map area, including new and previously recorded sites. |
| | 8 | Site boundaries for all new and previously recorded sites must be displayed as accurately scaled polygons (not points or triangles). |
| | 9 | For revisited sites where the site boundary is being revised, illustrate both the original site boundary (in RAAD at time of submission) and the new (revised) site boundary. If the original site location or boundary is incorrect in RAAD, this must be corrected as part of your update or reported to the Archaeology Branch for correction prior to completion of your site mapping. |
| | 10 | Site boundaries must be restricted to areas known to contain archaeological material. In cases where inferences can be made regarding site boundary extensions (*e.g.,* a site that obviously continues beyond a property boundary but remains untested), indicate this on the site map using standard symbol for inferred boundaries, but do not include the inferred area within corresponding GIS shapefiles. |
| | 11 | Include all relevant administrative, study area, and development boundaries. Cadastral (legal lot) boundaries must be shown when available. |
| | 12 | Use a directional photo symbol (see standard symbols) to show the point of origin and direction of each attached photo that illustrates *site location or surrounding landscape*. Photo symbols are not required on the map for artifact photos, stratigraphy photos, etc. Insert the photo number inside the photo symbol (e.g., P3). |
| *Options* | You may include captioned photographs as insets on the detailed site map, as long as mapping or image quality have not been compromised and all other mapping requirements have been met. | |
| | You may include a stratigraphic profile as an inset on the detailed site map, as long as mapping quality has not been compromised and all other mapping requirements have been met. | |
| | You may submit the midrange map as an inset on the detailed site map, as long as mapping quality has not been compromised and all other mapping requirements have been met. | |
| | In some circumstances, a single combined site map *may* be accepted in place of separate detailed and midrange maps, especially when zooming in/out would not provide additional useful information. Such combined maps are sometimes appropriate for isolated finds or small CMT sites and are usually around 1:4000 – 1:5000 in scale. They will only be accepted if mapping detail has not been compromised, the site location within the surrounding landscape is immediately evident, and all other mapping requirements have been met. | |

The collection of archaeological study area spatial data is a combined effort of the archaeological community and the Archaeology Branch to record locations where archaeologists have conducted field studies under permit. Study area boundaries submitted to the Branch are identified by permit number in a Study Areas spatial layer which will eventually be accessible via the Remote Access to Archaeological Data (RAAD) web application. The corresponding permit report can be accessed through the Provincial Archaeological Report Library (PARL).

The Study Areas layer in RAAD includes archaeological study areas for permits issued since July 2009. It contains few earlier and non-permit study areas. It may take several months for recently submitted study areas to appear in the layer. Caution should be taken when using the Study Areas layer in RAAD to identify previous work, as recent studies and studies predating July 2009 may not be shown.

## Study Area Submission Requirements and Options

The submission of study area shapefiles to the Archaeology Branch is **required** for:

- *Heritage Conservation Act* (HCA) Section 14 heritage inspection and investigation permits
- Cases where another process requires the submission of study area shapefiles (*e.g.,* permits in Tsilhqot'in National Government (TNG) Engagement Zones B and C)

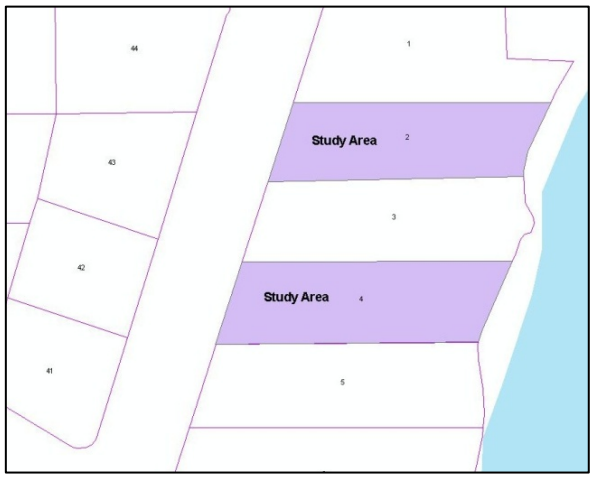
The Branch also encourages the submission of study area shapefiles for the following studies:

- Section 12 alteration permits
- Any permits pre-dating July 2009
- Non-permitted archaeological studies where a report has been submitted to the Archaeology Branch

## Study Area Definition

Study areas are defined as locations that have been assessed for archaeological sites or archaeological potential. In most cases, study areas will have been ground-truthed by visual inspection. However, they may also include areas that were part of the study but were not ground-truthed due to low archaeological potential. Study areas must be mapped, defined, and discussed in interim and final permit reports. There may be multiple study areas within a permit area.

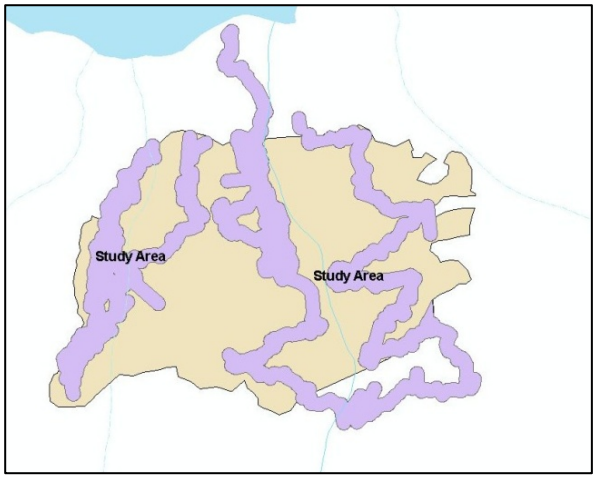
Study areas typically take the following forms:




Individual parcels

Specific project areas

Cut blocks where entire blocks have been assessed




Survey coverage areas

## Study Area Shapefile Requirements

See section on *ESRI Shapefile Requirements* for detailed requirements. In summary:

- Study area shapefiles must be in ESRI format and include four file types: **.shp, .shx, .dbf, .prj.** You can use iMapBC and RAAD to create shapefiles that are compatible with Archaeology Branch requirements.
- Study area boundaries must be represented as **polygons**. Study areas submitted as points or line features will not be accepted.
- Study area shapefile polygons must be identical to mapped study areas in shape, size, and location.
- There is no need to edit the database file (.dbf) for single polygons or multiple polygons where there is no significant distinction (*e.g.*, two sections of the same parcel that are separated by a road). However, for multiple study area polygons under a single permit where each polygon has unique identification data (*e.g.*, cut block numbers, hydro pole locations), edit the .dbf file to include a unique identifier for each polygon.

## Naming and Submitting Study Area Shapefiles

Submit study area shape files in a separate email to the Inventory section: ArchSiteForm@gov.bc.ca. Include the permit number (and interim report number if applicable) in the email. Do not combine study area shapefiles with site record submissions.

For **blanket permit study areas**:

- Study area shapefiles must be submitted for each interim report; they must be received no later than the date of interim report submission.

- Per Bulletin 24, shapefiles of multiyear archaeological studies can be submitted annually, on the anniversary of permit issuance.

- Include the interim report number in the file name, as follows:

  *Study_Area_2015_0047_0003.shp*
  *Study_Area_2015_0047_0003.shx*
  *Study_Area_2015_0047_0003.prj*
  *Study_Area_2015_0047_0003.dbf*

For **non-blanket permit study areas**:

- Study area shapefiles must be submitted no later than the date of final report submission.
- Include the permit number in the file name, as follows:

  *Study_Areas_2015_0142.shp*
  *Study_Areas_2015_0142.shx*
  *Study_Areas_2015_0142.prj*
  *Study_Areas_2015_0142.dbf*

# ESRI SHAPEFILE REQUIREMENTS

Archaeologists are required to submit ESRI shapefiles containing archaeological site boundaries, permit area boundaries, and study area boundaries to the Archaeology Branch. This section contains the content and formatting requirements for these spatial files.

For archaeologists without access to Geographic Information System (GIS) software, shapefiles can be created using iMapBC or RAAD. Shapefiles created in these two systems are compatible with Archaeology Branch requirements. You may also want to explore other online mapping sources.

## Required Files and Format

Shapefiles must be in ESRI format and include four file types: **.shp, .shx, .dbf, and .prj.**
Shapefiles must be in Albers projection (see below).
Shapefile polygons and their corresponding polygons on all maps must be identical in shape, size, and location.

## Spatial Features (.SHP and .SHX files)

All site, permit area, and study area boundaries must be represented as **polygons**. **Spatial files based on points or line features will not be accepted.**

## Projection (.PRJ file)

All spatial data submitted to the Archaeology Branch must be in Albers projection. The projection file (.prj) must use the following parameters:

| | |
|---|---|
| Alias: | Geographic Coordinate System: |
| Abbreviation: | Name: GCS_North_American_1983 |
| Remarks: | Alias: |
| Projection: Albers | Abbreviation: |
| Parameters: | Remarks: |
| False_Easting: 1000000.000000 | Angular Unit: Degree (0.01745329251994329 5) |
| False_Northing: 0.000000 | Prime Meridian: Greenwich (0.000000000000000000) |
| Central_Meridian: -126.000000 | Datum: D_North_American_1983 |
| Standard_Parallel_1: 50.000000 | Spheroid: GRS_1980 |
| Standard_Parallel_2: 58.500000 | Semimajor Axis: 6378137.000000000000000000 |
| Latitude_Of_Origin: 45.000000 | Semiminor Axis: 6356752.314140356100000000 |
| Linear Unit: Meter (1.000000) | Inverse Flattening: 298.257222101000020000 |

Shapefiles based on other common projection systems (*e.g.*, UTM) might be acceptable provided they are

accompanied by their respective projection (.prj) files. Send a test sample of your shapefiles to the Archaeology Branch for verification; include a corresponding map of the polygon's location for verification purposes.

## Attribute data (.DBF file)

There are no requirements for the content of the .dbf file; attribute data is not reviewed or used by the Archaeology Branch. However, a .dbf file must still be included with all shapefile submissions for system functionality.

## Naming Shapefiles

All shapefiles submitted to the Archaeology Branch must be named in a way that clearly describes the contents. Create a file name using the following information in the order presented, if applicable:

1. Description (*e.g. site boundary*; *permit area*; *study area*)
2. Site number (Borden or Temp)
3. Permit / Application / Interim Report number

**TIP:** To avoid having ArcGIS sometimes generate random errors, follow these best practices:

- Avoid starting names by number,
- Add an underscore instead of a space or dash, and
- Do not include a symbol outside of the underscore.

Examples of shapefile names:

Site boundary: *Site_boundary_DcRu_T41_2014_0424.shp*
Permit area: *Permit_area_11200_30_14A0452.shp*
Study area: *Study_area_2015_0142.shp*

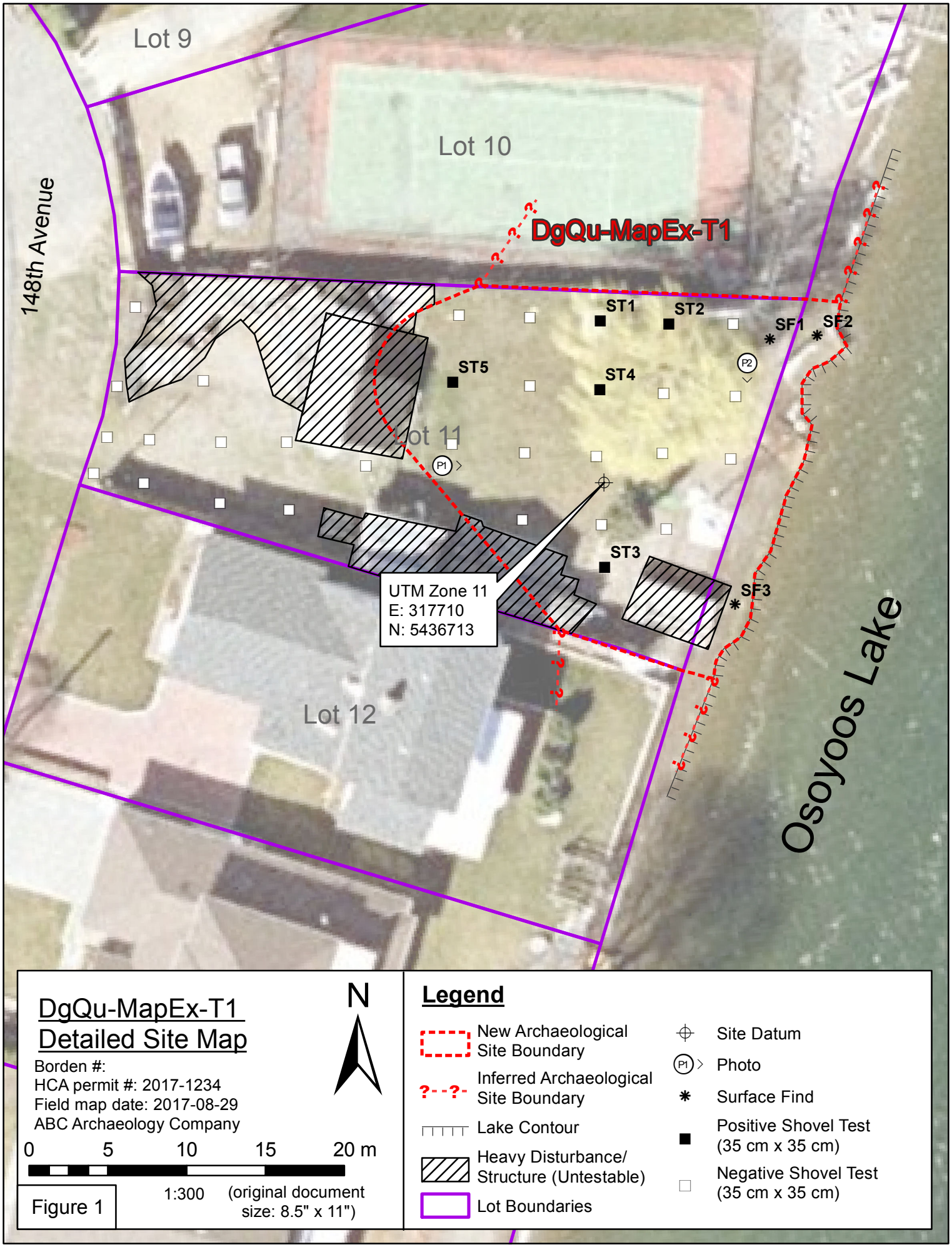
## Special Instructions for TNG Portal

Permit area shapefiles submitted with permit applications within Tsilhqot'in National Government (TNG) Engagement Zones B and C need to comply with TNG portal specifications. Refer to the bulletin (TBD) on the Archaeology Branch website for special instructions regarding shapefiles submitted for the TNG portal.

## Special Instructions Regarding KMZ Files

When shapefiles are required for permit applications, please also provide .KMZ files; this is the data preferred by many First Nations and allows the Branch to proceed without asking you for more information.

# APPENDIX A: MAP EXAMPLES




## DgQu-MapEx-T1 Detailed Site Map

Borden #:
HCA permit #: 2017-1234
Field map date: 2017-08-29
ABC Archaeology Company

N

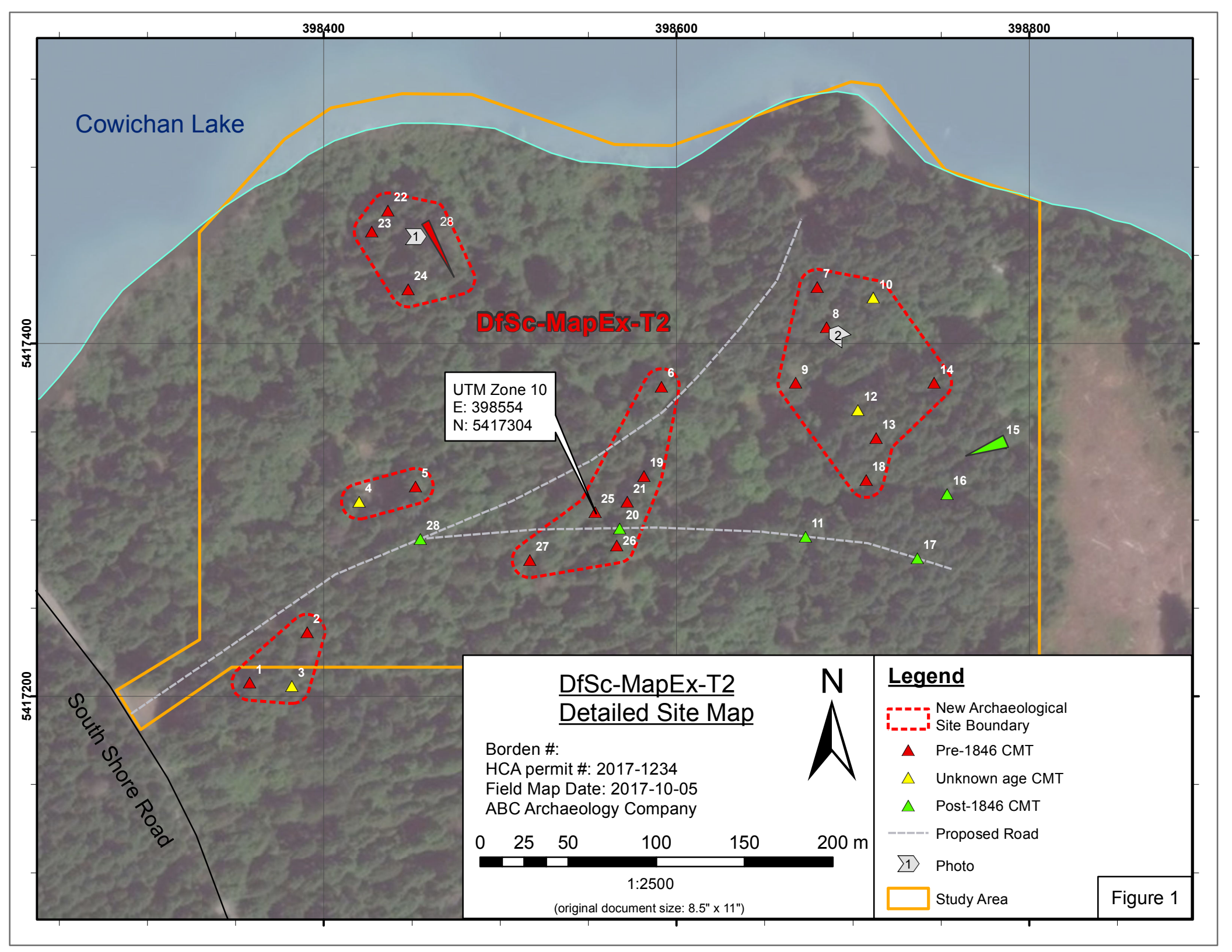
0 5 10 15 20 m

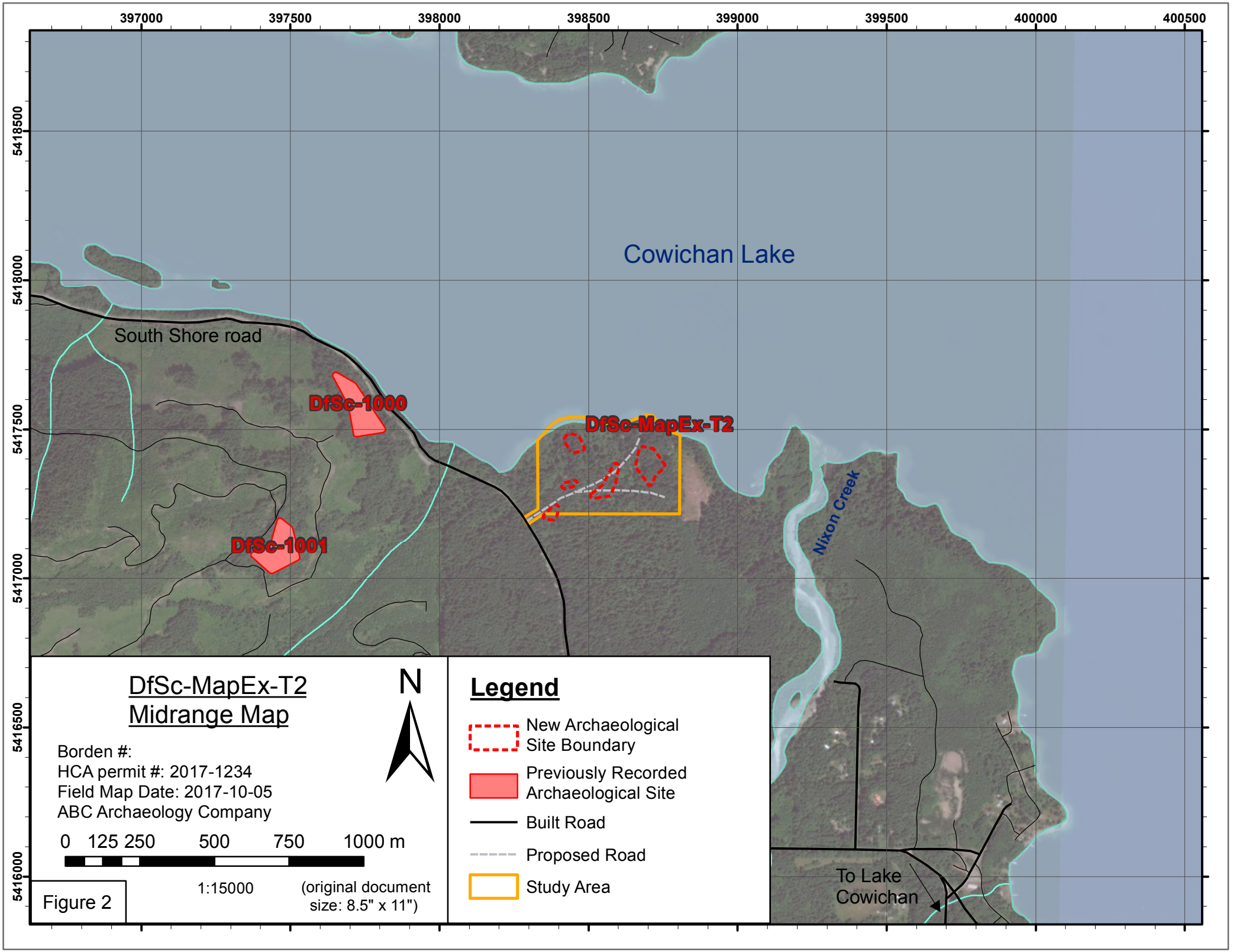
1:300 (original document size: 8.5" x 11")

Figure 1

### Legend

- New Archaeological Site Boundary
- Inferred Archaeological Site Boundary
- Lake Contour
- Heavy Disturbance/ Structure (Untestable)
- Lot Boundaries
- Site Datum
- Photo
- Surface Find
- Positive Shovel Test (35 cm x 35 cm)
- Negative Shovel Test (35 cm x 35 cm)


398400
398600
398800
5417400
5417200
Cowichan Lake
DfSc-MapEx-T2
UTM Zone 10
E: 398554
N: 5417304
South Shore Road
DfSc-MapEx-T2
Detailed Site Map
Borden #:
HCA permit #: 2017-1234
Field Map Date: 2017-10-05
ABC Archaeology Company
N
0 25 50 100 150 200 m
1:2500
(original document size: 8.5" x 11")
Legend
New Archaeological Site Boundary
Pre-1846 CMT
Unknown age CMT
Post-1846 CMT
Proposed Road
Photo
Study Area
Figure 1


397000
397500
398000
398500
399000
399500
400000
400500
5418500
5418000
5417500
5417000
5416500
5416000
Cowichan Lake
South Shore road
DfSc-1000
DfSc-MapEx-T2
DfSc-1001
Nixon Creek
To Lake Cowichan
DfSc-MapEx-T2
Midrange Map
Borden #:
HCA permit #: 2017-1234
Field Map Date: 2017-10-05
ABC Archaeology Company
N
0 125 250 500 750 1000 m
1:15000
(original document size: 8.5" x 11")
Figure 2
Legend
New Archaeological Site Boundary
Previously Recorded Archaeological Site
Built Road
Proposed Road
Study Area