

Artefact Scatter and Low Density Artefact Distributions

1.1 Artefact scatters and low density artefact distributions

For the purposes of these Recording Standards, artefacts are any object that has been used, modified or manufactured by a person and which form part of an Aboriginal place (s.4 of the Act) that relates to the Aboriginal occupation of Victoria. They may be found in a range of contexts on the surface and below ground; in isolation or in association with a range of other cultural heritage.

For all artefacts which do not have a known origin and do not form part of an Aboriginal place, please refer to the section on Aboriginal Objects for recording guidance.

There are two broad categories for types of artefacts:

1.1.1.1 *Lithic artefacts*

A lithic artefact is any culturally modified stone tool material and includes both formal tool types (which must have one or more diagnostic features associated with manufacture), and the discarded material associated with tool production or quarrying. They may also be unmodified stone that shows signs of use (e.g. a grindstone).

1.1.1.2 *Non-lithic artefacts*

A non-lithic artefact is any artefact that is manufactured from a material other than stone. This includes materials such as non-human bone, shell and post-contact artefacts manufactured from European materials. It also includes clay heat retainers that do not have an identifiable source and ochre fragments which can be recognised as artefacts. This may be by means of association with an Aboriginal place composed of other cultural heritage, or by their own form (e.g. clay balls that have an identifiable fingerprint impressed into their surface).

1.1.2 When to use low density artefact distribution vs artefact scatter

The Recording Standards allow for artefacts to be recorded as a low density artefact distribution (LDAD) or an artefact scatter, based on the density of the material observed.

N.B.: It is extremely important to understand that density is not considered a measure of cultural significance but rather a scientific measure of abundance and clustering of this type of cultural heritage.

Low density artefact distributions (LDADs)

LDADs are used to record low densities of artefacts across a landscape. There is no assumption of a relationship between artefacts within a single registration and therefore no extent can be prescribed. The LDAD type is most appropriate for registering artefacts where densities are low and where clustering is minimal or absent.



1.1.2.1 Artefact Scatter

The artefact scatter place type is used to record the abundance and clustering patterns of moderate to high densities of artefacts across a landscape. An extent must be assigned to Aboriginal places of this type.

As with LDADs, basic diagnostic features of the artefacts themselves must be recorded, but this may be constrained to a representative sample if artefact numbers are high. The component form also requires mapping, spatial data and contextual information about the place to be supplied.

N.B.: This component form is also used to record low densities of artefacts in association with other types of Aboriginal cultural heritage.

When selecting a recording method, it is important to ensure that the method reflects the results of the archaeological assessment, and that the assessment has included an appropriate level of survey and/or subsurface testing to establish the density, extent and nature of the cultural heritage. In the case of Aboriginal places recorded during the preparation of a Cultural Heritage Management Plan (CHMP), Aboriginal Cultural Heritage Land Management Agreement (ACHLMA) or cultural heritage permit application, consultation must occur with the Approval Body¹ of that plan/agreement/permit and with reference to First Peoples - State Relations (FPSR) *Practice Note: Subsurface Testing* (available on FPSR's website).

Table 1 outlines the density thresholds for LDADs and artefact scatters. These thresholds have been defined by FPSR.

N.B.: Where the density threshold for an LDAD is exceeded, an artefact scatter component form with an extent must be submitted.

Table 1: Designated density thresholds for artefact recording methods.

	LDAD	Artefact Scatter
Density	\leq^2 10 artefacts within any area of 10 by 10m square (100 square metres)	$>^3$ 10 artefacts within any area of 10 by 10m square (100 square metres)

For consistency, area and density assessments are to be applied as per Figure 1 below. This includes both surface and subsurface artefacts and applies to any 10 by 10m square area. This calculation is applicable to counted artefacts⁴ only - extrapolations from samples must not be included in these calculations.

When designing appropriate subsurface testing programs, consideration must be given to:

- (a) environmental conditions:
 - (i) depth of stratigraphy
 - (ii) patterns of disturbance

¹ i.e. An appointed RAP; or where there is no appointed RAP, First Peoples - State Relations.

² Less than or equal to.

³ Greater than.

⁴ Such as artefacts identified and analysed through survey and subsurface excavation.

(b) previously observed patterns in the distribution of cultural heritage.

These considerations are necessary to obtain an accurate reflection of the density of cultural material within an area of 10 by 10m square. It is also important that subsurface testing programs are adapted if unexpected conditions are encountered. See Figure 2 and Figure 3 below for examples of incorrect and correct density calculations.

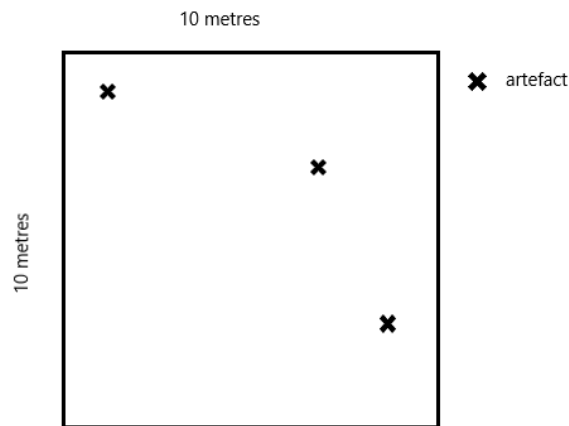


Figure 1: Method by which area and density of artefacts must be calculated

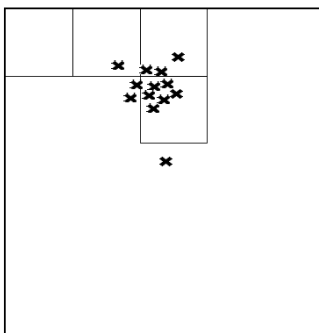


Figure 2: Incorrect density calculation using a uniform array of 10 x 10m grid squares applied from a pre-set datum

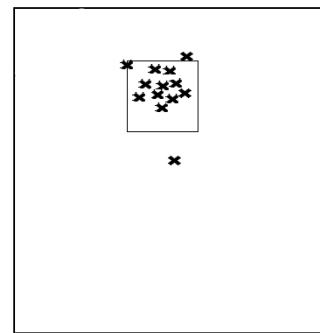


Figure 3: Correct density calculation using any 10 x 10m area

Table 2 below identifies a range of scenarios that have been noted as common outcomes of cultural heritage assessments (including CHMPs). Alongside the scenario, the table documents whether there is a required recording method or a preferred recording method. Where there is a preferred recording method, an alternate method is also presented alongside the conditions for adoption of that alternate method. Where a scenario is encountered that is not documented in Table 2, it is strongly recommended that the Victorian Aboriginal Heritage Register (VAHR) be contacted to discuss how to proceed.

Table 2. Guide to recording methods available and conditions around their use

Scenario	Required recording method	Preferred recording method	Alternative recording method	Conditions that must be met to use alternative recording method
Counted density of $>^5 10$ artefacts within any 10 x 10m square area (100 square metres)	artefact scatter		not available	
Counted density of $\leq^6 10$ artefacts within any 10 x 10m square area in association with other cultural material	artefact scatter		not available	
Artefact scatter composed of lithic and non-lithic materials		artefact scatter	LDAD for lithic components; artefact scatter for non-lithic	No basis for extent possible
Counted density ≤ 10 lithic artefacts within any 10 x 10m square area		LDAD	artefact scatter	<ul style="list-style-type: none"> ▪ Clear basis for extent. Preferably landform based and discrete. ▪ Where an argument is based on artefacts being dispersed due to post-depositional processes (including prior land use), evidence must be provided of this. ▪ Extrapolated density calculations for subsurface testing results indicate moderate to high density evidence is required and constraints to subsurface testing must be identified.
Non-lithic artefacts	artefact scatter		not available	
Unprovenanced lithic artefacts (e.g. associated with fill) with counted density of ≤ 10 artefacts within any 10 x 10m square area		LDAD ⁷	Object Collection	Clear basis for extent that is constrained to a feature, such as the introduced fill
Unprovenanced lithic artefacts (e.g. associated with fill) with counted density of > 10 artefacts within any 10 x 10m square area OR unprovenanced non-lithic artefacts	Object Collection		not available	

⁵ Greater than.

⁶ Less than or equal to.

⁷ In this situation, use a suffix of UNPROVENANCED within the LDAD place name.

Table 3 below outlines the differences between the minimum documentation requirements between the LDAD and artefact scatter recording systems.

Table 3. Minimum requirements for LDADs and artefact scatters

Documentation	LDAD	Artefact Scatter
Level of artefact analysis detail required	All artefacts	Representative sample that illustrates abundance, clustering/density ⁸ and form (raw material and primary form)
Place/component extent mapping	Point	Polygon
Mapping to demonstrate extent testing where subsurface artefacts are recorded	Yes (must be added to the <i>Supporting Documentation</i> tab)	Yes (part of extent plan)
Environmental context details	No (but may be added to supporting documentation if helpful to the interpretation of the record)	Yes
Photograph(s)	Yes	Yes

1.1.2.2 **A note on artefact analysis**

To assist with comparability between the basic measurements of artefacts across the two systems, users are encouraged to use the same artefact analysis spreadsheet for both artefact scatters and LDADs. The excel template *Low Density Artefact Distribution Recording Form.xlsx* can be found on the FPSR website.

If it is necessary to record other measurements, new fields may be added to the existing template and saved as a separate spreadsheet.


N.B.: do not save changes to the template spreadsheet if it is intended to be imported directly into the LDAD component form, as the application does not allow additional fields to be added to the form when using the LDAD import function. Any augmented spreadsheets must instead be added via the *Supporting Documentation* tab.

1.1.3 **Completing a new low density artefact distribution (LDAD) application**

1.1.3.1 **General considerations**

- (a) There is no assumption of association between artefacts recorded in the same LDAD registration and so there is no requirement to submit separate applications depending on location, context (e.g. landform) or raw material/primary form.
- (b) Generally, there would be a maximum of one km between artefacts within a single registration. Exceptions may be made for linear projects. However, it is recommended that all artefacts within an LDAD be located on the same 1:100 000 map sheet.

⁸ Artefact Scatters must depict on an extent plan where the LDAD threshold has been crossed

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- (c) Coordinates for subsurface artefacts found in excavation pits may relate directly to the pit if necessary and not the artefact themselves.

1.1.3.2 ***Location and Recording & Consultation tabs***

Date Place Recorded*

When submitting a registration for an LDAD it is acknowledged that not all artefacts within one registration may have been recorded on the same day, but when entering data into this field a user must specify a single date. Users are given discretion to specify the most representative date.

Where it is necessary to document specific recording dates for single artefacts this may be done in a document attached to the *Supporting Documentation* tab.

1.1.3.3 ***Low Density Artefact Distribution Component Form (place form)***

Unlike other component place types, the place form for an LDAD is simplified and lacks the tabs for *Plans, Land Info, Environmental Setting, and Condition and Management*.

Import file

This is where the user may upload a completed copy of *Low Density Artefact Distributions Recording.xlsx*. This auto-populates the *Low Density Artefact Distribution Component Form*.

N.B.:

- (a) Do not alter the number of fields or the field names in the template spreadsheet (this includes adding and removing fields themselves); otherwise the ACHRIS application will not allow the spreadsheet to be imported. Where additional fields would be useful, the basic fields must be completed and a separate excel spreadsheet with the additional fields may be uploaded as a supporting document.
- (b) The Easting and Northing of the first entry of the table must coincide with the Easting and Northing of the Primary Grid Coordinate (PGC) specified for the place.

As an alternative to uploading the *Low density Artefact Distributions Recording form.xlsx* a user may manually input data into the *Low Density Artefact Distribution component form* table.

The LDAD table fields, their purpose and the available input options within the *Low Density Artefact Distribution component form* table are outlined following. Some fields are mandatory depending on the artefact's primary form. Where fields are mandatory, they have been marked with an asterisk (*)

Easting*

Allows the component to be mapped. Requires a six digit number (and takes up to three decimal places).

Northing*

Allows the component to be mapped. Requires a seven digit number (and takes up to three decimal places).



Zone*

Allows the component to be mapped. Select zone 54 or 55.

Depth (m)*

Records the depth below ground surface in metres. Input '0' (nought) if the artefact is on the surface. Otherwise enter the depth in metres. E.g. if the artefact is recorded 74cm below the ground surface, the value must be entered as 0.74.

Raw material*

This is a general descriptor of the type of raw material from which the artefact has been manufactured. Select from the options in the drop-down menu.

andesite	basalt	chalcedony	chert
coastal flint	crystal quartz	greenstone	hornfels
phonolite	quartz	quartzite	rhyolite
sandstone	silcrete	slate	tachylite
trachyte	other		

Primary form*

A general descriptor of the primary form of the artefact. Select from the options in the drop-down menu.

angular fragment	blade-complete	blade-distal	blade-longitudinal split
blade-medial	blade-proximal	cobble or pebble	core-bidirectional
core-bifacial	core-bipolar	core-multidirectional	core-unidirectional
flake-complete	flake-distal	flake-longitudinal split	flake-medial
flake-proximal	slab		

Cortex*

An indicator of the percentage of the artefact which is covered in cortex. For flaked artefacts, record only the amount of cortex on the dorsal surface. Select from the options in the drop-down menu.

none	1-32%	33-66%
67-99%	100%	



% of edge with retouch/usewear

This field is an indicator of the percentage of the artefact’s margins which have visible retouch or usewear. Select from the options in the drop-down menu.

- none
 - 1-32%
 - 33-66%
- 67-99%
 - 100%

N.B.: This field is mandatory for the following primary forms:

- angular fragment
- blade-complete
- blade-distal
- blade- longitudinal split
- blade-medial
- blade-proximal
- flake-complete
- flake-distal
- flake- longitudinal split
- flake-medial
- flake-proximal

Flake platform

This field is a general characterisation of the artefact’s platform type. Select from the options in the drop-down menu.

- abraded (ground)
- cortex
- crushed
- faceted
- flaked
- plain
- retouched

N.B.: This field is mandatory for the following primary forms:

- blade-complete
- blade-proximal
- flake-complete
- flake-proximal

Flake termination

This field is a general characterisation of the artefact’s termination type. Select from the options in the drop-down menu.

- axial
- crushed
- feather
- hinge
- plunge (outrepassé)
- retouched
- step

N.B.: This field is mandatory for the following primary forms:

- blade-complete
- blade-distal
- blade-longitudinal split
- flake-complete
- flake-distal
- flake-longitudinal split

Number of complete scars

Count the number of complete scars visible on the artefact’s surface and select from the drop-down menu.

- 1
- 2
- 3
- 4
- 5
- 6
- >6

N.B.: This field is mandatory for the following primary forms:

core-bidirectional
core-multidirectional

core-bifacial
core-unidirectional

core-bipolar

Longest scar (axial mm)

Measure the axial length of the longest complete scar on a core, entering the measurement in millimetres (to a maximum of 3 decimal places).

N.B.: This field is mandatory for the following primary forms:

core-bidirectional
core-multidirectional

core-bifacial
core-unidirectional

core-bipolar

Formal tool/core type

A general characterisation of the artefact if it can be recognised as a formal tool type. Select from the options in the drop-down menu.

adze – flake	adze – tula	anvil
axe – ground edge	axe – preform	backed – bondi point
backed – elouera	backed – geometric microlith	burin
chisel	core – blade	core – burin blade
core – horsehoof	core - microblade	grinder
grinding slab	grinding stone	hammerstone
manuport	notched tool	nuclear tool – bifacial chopper
nuclear tool – unifacial chopper	point – bifacial	point – engraver, drill or piercer
point – unifacial	scraper – amorphous	scraper – concave and nosed
scraper – flat-edged	scraper –round-edged	scraper –steep-edged
scraper – thumbnail	wedge	

Secondary Modifications

A general descriptor of any secondary modifications visible on the artefact. Select from the options in the drop-down menu.

battering	grinding	grooved
heating	pecking	waisted



Length* (mm)

An axial length measurement for any artefact. Insert the measurement in millimetres (to a maximum of 3 decimal places). This value is not required for artefacts with no discernible axis of percussion (Angular Fragment, Slab and Cobble or Pebble).

Width* (mm)

An axial width measurement for any artefact. Insert the measurement in millimetres (to a maximum of 3 decimal places). This value is required for all lithic artefacts.

Thickness* (mm)

A measurement of the artefact's thickness. Insert the measurement in millimetres (to a maximum of 3 decimal places). This value is required for all lithic artefacts

Maximum dimension* (mm)

A measurement of any artefact's maximum dimension. Insert the measurement in millimetres (to a maximum of 3 decimal places). This value is required for all lithic artefacts

N.B.: Where recorded artefacts have been removed from a place, an object collection form is required.

1.1.3.4 Supporting Documentation

This section outlines the types of additional information that may be expected as part of an LDAD submission. No spatial attachments are required for the LDAD component, as artefact co-ordinates are provided in the LDAD place form.

Non-Spatial Attachments*

The following non-spatial attachments **must** be provided:

- (a) Photo(s)*: A minimum of one photo of the cultural heritage included in the application. Provide photo(s) of the area(s) where the artefacts were found that would aid in relocation of the artefacts and are illustrative of the condition of the place components, including any locations containing disturbance or harm (ie: where the condition differs between components of an LDAD, include multiple photos). Photographs must be fully labelled using the following convention for file names:

name of Aboriginal place / image title date / year photographer description

E.g.: Talking Dog LDAD_12_Apr_2012_Joe Bloggs_Nth view of LDAD.jpg

- (b) Map(s)*: A map(s) showing the location of the cultural heritage relative to the subsurface testing program (if subsurface testing was conducted).

The following non-spatial attachments are **optional**:

- (a) A document containing specific feedback from the RAP(s) or Traditional Owners about the artefacts included in the application.
- (b) An excel spreadsheet with any additional fields deemed useful in the analysis of the artefacts included in the application.

- (c) Documents with any relevant contextual information about the artefacts included in the application e.g. survey or excavation summaries.

1.1.4 LDAD Record Edit minimum requirements

When completing a Record Edit on an LDAD, there are a number of mandatory fields which must be completed depending on the scenario identified at the initiation of the Record Edit process.

Table 4 gives a summary of these mandatory changes. If it is a document that is required, the general content of that document is specified under the field *Additions to the Supporting Documentation* tab.

Table 4. LDAD Record Edit minimum requirements

Option	PGC update	Updates to recorder information and date of recording information	Changes to the artefact analysis table	Additions to the Supporting documentation tab	New or changes to existing object collection form
2	✓	✓	✓	x	x
3	x	✓	✓ ⁹	Photo/s	x
4	x	✓	x	Photo/s; Details on why cultural heritage was unable to be found	x
6	x	✓	x	Letter of support from RAP or Traditional Owner	x
7	x	✓	✓	x	✓
8	x	✓	x	Photo	x

1.1.5 Completing a new artefact scatter component form

1.1.5.1 *Extent descriptions for artefact scatters*


Where applicable, the following points must be included within extent descriptions for Artefact Scatters.

1. Summary of direct observations about the artefact scatter

A short summary of the nature of the place and how it is being recorded. It should include, where relevant:

- (a) total count of artefacts and associations with any other cultural heritage
- (b) if there are unique features about the scatter such as variation in densities or stratification that are being treated as separate components
- (c) description of the artefact's context e.g. surface/subsurface, any direct associations with landforms, sediments or other features
- (d) summary of the methodology employed as part of the assessment to locate the artefacts (e.g. subsurface excavation or survey). Any broader observations about the results of the

⁹ If the newly recorded artefacts result in the LDAD density threshold being exceeded, a new Artefact Scatter submission must be submitted for that area.



assessment and unique features of the location relative to the overall results of the assessment

(e) a summary of any archival research conducted that influenced the extent of the place.

2. Summary of any constraints or limitations to the survey or subsurface testing (where applicable)

If there were limitations to the survey or subsurface testing these should also be identified. These may include scenarios such as the following:

- (a) extent testing was constrained by the limits of the activity area
- (b) any obstructions to testing and survey, i.e. existing structures or dangerous materials (e.g. asbestos)
- (c) observations about areas of prior disturbance where testing was limited or absent and why.

3. Predictive statements (if constraints/limitations were encountered)


Where there were constraints to the assessment of the artefact scatter's full nature and extent, a predictive statement is required to describe the likely extent of the place, or at minimum where it may extend to. This statement must be based on direct observations, knowledge about the constraints, and information available from the desktop assessment.

Example A: an extent description based on direct observation only and landform:

Six hundred artefacts were recorded on the crest and upper slopes of a hill. The hill is located at the confluence of a small unnamed stream and Deep River. An initial survey recorded a total of five artefacts within shallow erosion scars, but subsequent subsurface testing identified a further 595 artefacts within three 1x1m test pits on the crest and upper slopes of the hill. The assemblage is composed of a range of materials including silcrete, quartzite and quartz with flakes, cores and formal tools of all materials identified. A single basalt grindstone was also recorded. Subsurface testing on the lower slopes of the hill and the surrounding alluvial plain revealed cultural heritage was almost entirely absent, except for a single artefact recorded in one test pit on the plain (recorded as Deep River plain LDAD). Therefore, the extent of the artefact scatter is defined by the crest and upper slopes of the hill.

Example B: an extent description that addresses all three points:

Two hundred lithic artefacts were recorded on a stony rise during survey and subsurface testing. Survey and subsurface testing on the plain surrounding the rise was negative for cultural heritage. The stony rise is in the north-west of the activity area and its full extent extends beyond the activity area. However, only that portion which was within the activity area was investigated (an area of approximately 900 sqm). One hundred and fifty artefacts were recorded during the surface survey and were relatively evenly distributed across the portion of the rise within the activity area. Further, the excavation of a single 1x1m test pit identified 50 artefacts within the top 0.1m of the test pit within a sediment that may be described as silty loam. The assemblage of recorded artefacts was dominated by silcrete flakes with significant levels of breakage. Observations of the rise indicate it has been impacted by cattle trampling and shows some signs of recent European quarrying for basalt; therefore, subsurface testing was targeted to the more



intact portion of the rise. The place extent is defined by the rise and the activity area; however, it could be expected that the scatter would extend north to the limits of the whole rise.

1.1.5.2 **Other considerations**

- (a) Does the density count include all artefacts within a 10 x 10m square area? This must include previously registered Aboriginal places inside and outside of the current activity area (or study area). Look for artefacts recorded in neighbouring study areas if artefacts are found on the boundary of the current activity area.
- (b) Is the LDAD an extension to a previously recorded artefact scatter? Is it the same landform, context etc? Should it be a Record Edit? Compare and analyse. If an LDAD is submitted, an argument for why it is necessary to register these artefacts as an LDAD is required.
- (c) Have other types of cultural material been previously recorded nearby? Should this be a Record Edit? E.g. where artefacts are later recorded within the extent of an already registered scarred tree.

1.1.5.3 **Name & Location tab**

Component Name

This field is an opportunity to specify a unique name for a component when there are two or more components, especially of the same component type. This is also useful when components are being used to distinguish between different stratigraphic layers within artefact scatters, or areas of different densities.

Component Location

This section is composed of three fields that specify the location of the component:

Easting*

Northing*

Zone*

The system automatically pre-populates these fields based on the PGC for the place, but they may be changed if necessary.

Considerations:

- (a) The component Easting and Northing for at least one component Aboriginal place must be the same as those of its PGC.
- (b) Where there is more than one component, each subsequent component must have a unique Easting and/or Northing.

1.1.5.4 **Analysis tab**

Artefact Scatter Details

Composed of six fields, this tab requires details about the context of the artefact scatter, surface visibility and which portion of the scatter was examined.



Context*

Select one or more of the following four options to describe the context in which the artefacts were found.

cave

open site

overhang

subsurface

Has excavation occurred?*

Yes or No must be selected.

If yes is selected, the *Sediment Analysis Table* appears at the bottom of the tab and details of the stratigraphy of the excavation pit in which artefacts were encountered must be provided.

Is this an isolated artefact?*

Select Yes or No.

Ground Surface Exposure (%)*

Input a number that describes the percentage of ground surface visible.

Has the whole artefact scatter been examined?

Select Yes or No.

Area examined (sqm)*

Provide a number to indicate in square metres the area of the scatter examined. The answer to this question should relate back to whether the whole scatter was examined and if it was only sampled this figure should reflect the area sampled.

Sediment Analysis Table

If artefacts were recorded in more than one excavation pit, the details of the most representative excavation pit should be provided.

Layer/Deposit*

Provide a number or name for the excavated layer or deposit (e.g. Spit 1).

Excavated area*

Provide the number or name of the excavated area (e.g. STP 9).

Artefacts present*

An indicator of whether artefacts are present within the layer. Yes or No.

Max. density of cultural material (sqm)

Indicate the maximum density of cultural heritage per square metre.

Min. density of cultural material (sqm)

Indicate the minimum density of cultural heritage per square metre.



Sediment*

Use this field to describe the composition of the sediment within the layer/deposit¹⁰.

clay	clayey silt	gravel	peat
sand	sandy clay	sandy silt	silt
silty clay	silty sand		

Compaction*

Select a category which describes the compaction of the sediment within the layer/deposit

compact	firm	friable	hard
indurated	loose	plastic	soft
spongy	stiff	strongly cemented	very soft
weakly cemented			

Colour (Munsell)

Provide the colour of the layer/deposit in the standard format described in the Munsell Soil Colour Chart

pH Reading

State the pH level of the layer/deposit as a numeric indicator taken from a pH test kit.

1.1.5.5 **Artefacts tab**

Composed of two fields and two tables, this tab requires details recorded about the artefacts associated with this component.

Number counted

The total number of artefacts counted within this component.

If the place is being represented as one component this would represent the total count of artefacts within the place.

Number predicted

1. Based on the number of artefacts counted from a sampled area in the component, and the total area of the sampled area, estimate the total number of artefacts which are predicted within the component's extent.

N.B.: In many instances, the easiest way to calculate the area of an irregularly-shaped polygon (i.e. sampled area, component polygon area) is via a GIS application.

¹⁰ Sediment texture options are based on McDonald and Isbell's (2009) field texture grade.


$$NC \div SA = EA$$

where:

NC = total **number** of artefacts **counted** in examined sample area(s)

SA = total size of **sampled area**(s) in square metres (m²)

EA = **estimated artefacts** per m²

Or, in other words:

counted artefact total \div area examined in square metres = **artefact count per square metre**

2. Next, multiply the estimated artefacts per square metre (EA) by the total component area (CA) in square metres, to arrive at the **number of predicted artefacts** for the component:

$$EA \times CA = NPA$$

where:

EA = estimated artefacts per square metre (m²)

CA = component area in square metres (m²)

NPA = number of predicted artefacts for the component

Or, in other words:

artefact count per square metre \times component area in square metres = **number of predicted artefacts.**

Lithic Artefacts Table

The *Lithic Artefacts Table* can be used to input the details of each individual artefact. However, at a minimum, a representative breakdown of the artefact assemblage by raw material and primary form must be supplied.

Where a representative sample is provided it must reflect the most common categories within the assemblage and equate to a minimum of 10% of the total assemblage (e.g. where 2000 artefacts are recorded, a sample of at least 200 artefacts must be provided in the table).

N.B.: Exceptions may be made for exceptionally large assemblages, but if this is the case contact must be made with the VAHR to discuss.

When inputting the data, each row must refer to how many artefacts were counted for one raw material and one primary form at a time (Figure 4).

Lithic Artefacts Table			
Add Lithic Artefacts Detail			
Number of Artefacts	Raw Material	Manufacture Type	Actions
2	Silcrete	Complete flake	Open Remove
3	Quartzite	Proximal flake	Open Remove
2	Silcrete	Distal flake	Open Remove
2	silcrete	Longitudinal split flake	Open Remove

Figure 4. Example of the form in which to input a representative sample of artefacts into the lithics artefact table

N.B.: If a representative sample is provided in the table, a spreadsheet containing the full analysis details of the assemblage must be uploaded to this component’s *Supporting Documentation* tab under the *Non-Spatial Attachments* section.

Number of Artefacts*

The total number of artefacts of that type, i.e. of material and primary form (e.g. 2 silcrete complete flakes). Where recording individual artefacts, insert ‘1’. Where a representative sample is being provided, state the number of artefacts of that raw material and primary form.

Raw Material*

State the raw material from which the artefact(s) are manufactured.

- | | | | |
|---------------|----------------|------------|-----------|
| andesite | basalt | chalcedony | chert |
| coastal flint | crystal quartz | greenstone | hornfels |
| phonolite | quartz | quartzite | rhyolite |
| sandstone | silcrete | slate | tachylite |
| trachyte | other | | |

Primary Form*

Describe the primary form of the artefact.

- | | | | |
|------------------|----------------|------------------|--------------------------|
| angular fragment | blade-complete | blade-distal | blade-longitudinal split |
| blade-medial | blade-proximal | cobble or pebble | core-bidirectional |

core-bifacial	core-bipolar	core-multidirectional	core-unidirectional
flake-complete	flake-distal	flake-longitudinal split	flake-medial
flake-proximal	slab		

Cortex

State the percentage of the amount of cortex on the artefact. For flaked artefacts, record only the amount of cortex on the dorsal surface.

none	1-32%	33-66%
67-99%	100%	

Flake Platform

State the form of a platform.

abraded (ground)	cortex	crushed	facetted
flaked	plain	retouched	

Flake Termination

State the form of the termination (complete and distal flakes only).

axial	crushed	feather	hinge
plunge (outrepassé)	retouched	step	

Number of Complete Scars

Indicate the number of complete negative flake scars evident (cores only).

Secondary Modifications

Describe any secondary modification visible on an artefact.

battering	grinding	grooved
heating	pecking	waisted

Formal tool/core type

Indicate if the artefact is a formal tool, from the range of categories below.

adze – flake	adze – tula	anvil
axe – ground edge	axe – preform	backed – bondi point
backed – elouera	backed – geometric microlith	burin
chisel e	core – blade	core – burin blade



core – horsehoof	core - microblade	grinder
grinding slab	grinding stone	hammerstone
manuport	notched tool	nuclear tool – bifacial chopper
nuclear tool – unifacial chopper	point – bifacial	point – engraver, drill or piercer
point – unifacial	scraper – amorphous	scraper – concave and nosed
scraper – flat-edged	scraper –round-edged	scraper –steep-edged
scraper – thumbnail	wedge	

Length (mm)

An axial length measurement for complete artefacts. State the measurement in millimetres (to a maximum of 3 decimal places).

Width (mm)

An axial width measurement for complete artefacts. State the measurement in millimetres (to a maximum of 3 decimal places).

Thickness (mm)

A measurement of the artefact's thickness. State the measurement in millimetres (to a maximum of 3 decimal places).

Non-Lithic Artefacts table

This table is used to record any artefacts associated with an Aboriginal place that are manufactured from a material other than stone.

This includes materials such as bone, shell and post-contact artefacts manufactured from European materials. It also includes clay heat retainers that do not have an identifiable source, and ochre fragments which can be recognised as artefacts. This may be by means of association with an Aboriginal place composed of other cultural heritage or by their own form (e.g. clay balls that have an identifiable fingerprint impressed into their surface or ochre in association with rock art or a grindstone exhibiting staining).

N.B.: The description for clay heat retainers and ochre fragments must clearly identify where contextual factors have been used to identify the material as artefactual. This may include clay balls being found in a sand-dominated landscape and being found in close spatial association with other Aboriginal cultural heritage.

N.B.: Clay heat retainers which are part of a distinct, identifiable hearth or oven feature must be recorded with the *Earth Feature Component*, and not in the non-lithic artefacts table of the *Artefact Scatter Component*.



Number of artefacts*

State the total number of artefacts of that artefact type and material (e.g. 2 wooden bowls; 3 bone awls). Where the table is being used to record individual artefacts, insert '1'. Where a representative sample is being provided, state the number of artefacts of that material and artefact type.

Material*

The material from which the artefact/s were manufactured (e.g. wood, grass, plant fibre, worked bone, glass, metal, etc).

N.B.: Where artefacts manufactured from materials associated with the colonial or modern period are present, an Aboriginal historical place component should be considered.

Artefact type*

Briefly state the type of artefact being recorded (e.g. fish hook).

Description*

Provide an expanded description of the artefact and where known, its function. Where a function is described, this description must include how the function was derived.

1.1.5.6 **Supporting Documentation tab**

Non-Spatial Attachments

Files of various types may be uploaded using the *Choose file to upload* tool.

N.B.: For each attached file, indicate the presence of sensitive material.

The following files **must** be included:

- (a) Artefact analysis spreadsheets* (**required** where a representative sample has been provided in the lithic analysis table)

N.B.: users are encouraged to use the *Low density artefact distributions recording form.xlsx* which can be downloaded from FPSR's website to ensure consistency and comparability between all artefact assemblages.

- (b) Photographs of a representative sample¹¹ of the artefacts*. Photographs of the context of the place that would aid in relocation of the place or are illustrative of the condition of the place components, including any locations containing disturbance or harm*. Photographs must be fully labelled using the following convention for file names:


name of Aboriginal place / image title date / year photographer description

E.g.: Talking Dog artefact scatter_12_Apr_2012_Joe Bloggs_Nth view of artefact scatter.jpg

The following **optional** documents can also be uploaded:

- (a) Photographs of the stratigraphic profile at the completion of excavation

¹¹ Representative sample refers to a curated selection that is illustrative of the nature of the place and assemblage. Consider grouping artefacts by material type, manufacture class, recovery depth or testing location.

- 
- (b) Component extent plan
 - (c) Illustrations of the stratigraphic profile if the artefacts were found subsurface
 - (d) Documents containing further contextual information about the artefacts
 - (e) Residues analysis details
 - (f) Dating results documentation.

General note on non-spatial attachments

Where documents are attached, an indication of sensitivity must be provided. VAHR policy states that documents automatically gain a sensitivity rating where they contain specific details relating to Aboriginal Ancestral Remains. However, a RAP or Traditional Owner may request a document be marked as sensitive for other reasons.

If **Yes** is selected, a reason for sensitivity must be provided in the text field.

It is preferable that where documents relate specifically to one component, that they are uploaded to that component form. However, if necessary, documents may be added to the *Supporting Documentation* tab on the place form.

Spatial Attachments

Types of spatial data that may be uploaded include:

- (a) a dataset containing a polygon feature of the component extent
- (b) a dataset containing a point feature of the component grid coordinates
- (c) a dataset containing point features for the location of each artefact recorded
- (d) a dataset or datasets containing polygon or point features showing the locations where artefact samples were taken.

N.B.: All spatial data must be provided in either ESRI shapefile or MapInfo .TAB file formats, with a GDA94 projection.

Additional Information

This is a free text field which can be used to describe any other details about the component which cannot be recorded elsewhere.

This may include a summary of the component including its overall dimensions in square metres, and a note of any other associated components for multi-component Aboriginal places.

1.1.6 Artefact scatter Record Edit minimum requirements

Table 5 below outlines the requirements specific to artefact scatter components when a Record Edit is initiated under any one of the nine scenarios identified at the beginning of the Record Edit process.

These are minimum requirements only; there may be additional fields where input data is required depending on the specifics of any proposed Record Edit.

Table 5. Record Edit requirements for artefact scatter components

Option	Name and Location tab	Analysis tab	Artefacts tab	Supporting documentation tab
1 [^]	Update to component coordinate to align with place PGC (if place is composed of only one component)	Area examined; And any other field where additional data is available	Number counted Number predicted Updates to lithic and/or non-lithic artefacts table	Additional artefacts analysis spreadsheet Photo/s [#]
2	Update to component coordinate to align with place PGC (if place is composed of only one component)	x	x	x
3	x	Area examined; And any other field where additional data is available	Number counted Number predicted Updates to lithic and/or non-lithic artefacts table	Additional artefacts analysis spreadsheet Photo(s) [#]
4	x	x	x	Photo(s) [#]
5	x	x	x	Photo(s) [#]
6	x	x	x	Letter of support from RAP or Traditional Owner
7	x	x	x	x
8	x	x	x	Photo(s) [#]
9	Contact VAHR	Contact VAHR	Contact VAHR	Contact VAHR

[^] Where the Record Edit is the result of a desktop assessment, some fields may not be mandatory.

[#] Photos may be added to the component's *Supporting Documentation* tab or the *Supporting Documentation* tab on the place form.

1.2 Artefact scatter registration checklists

Table 6. Artefact scatter registration checklist

No.	Place details	Completed
1	a) Establish that there are greater than 10 artefacts in a 10 x 10m area	<input type="checkbox"/>
	b) If not, provide an appropriate reason for recording an artefact scatter	<input type="checkbox"/>
2	a) Subsurface artefacts: establish the subsurface testing program is sufficient for establishing the extent	<input type="checkbox"/>
	b) Document subsurface testing obstacles or limitations	<input type="checkbox"/>
3	a) Is a sample or the whole assemblage being submitted in the <i>Lithic Artefacts Table</i>	<input type="checkbox"/>
	b) Record the location and dimensions of the sampled area(s)	<input type="checkbox"/>
4	a) Record grid coordinate(s) for the location(s) of artefacts	<input type="checkbox"/>
	b) Where appropriate, record an extent for the artefact scatter	<input type="checkbox"/>
5	Has the context of the place been recorded?	<input type="checkbox"/>
6	Has the ground surface exposure been recorded?	<input type="checkbox"/>
7	Has the total area examined been recorded in sqm?	<input type="checkbox"/>
8	For lithic artefacts, record the:	
	c) number counted	<input type="checkbox"/>
9	d) each lithic artefact's basic diagnostic features, or those of a representative sample	<input type="checkbox"/>
	For non-lithic artefacts, have you recorded the following:	
10	a) basic diagnostic features?	<input type="checkbox"/>
	b) material type?	<input type="checkbox"/>
11	c) artefact type?	<input type="checkbox"/>
	d) description of the artefact (and maybe its function)?	<input type="checkbox"/>
12	For subsurface artefacts, record the following for the excavation pits in which they were found:	<input type="checkbox"/>
	a) layer name	<input type="checkbox"/>
13	b) excavation pit ID/name	<input type="checkbox"/>
	c) maximum density of cultural material by layer	<input type="checkbox"/>
14	d) minimum density of cultural material by layer	<input type="checkbox"/>
	e) sediment composition of each layer	<input type="checkbox"/>
15	f) sediment compaction within each layer	<input type="checkbox"/>
	g) colour (Munsell) of each layer	<input type="checkbox"/>
16	h) pH of each layer	<input type="checkbox"/>
	If the artefact scatter extent is based on landform:	
17	a) determine the approach to mapping the extent	<input type="checkbox"/>
	b) determine if the extent needs to be recorded in the field	<input type="checkbox"/>
18	Provide photo(s) of the artefact(s)	<input type="checkbox"/>
19	Provide photo(s) of the artefact scatter area(s) context, that would aid in relocation of the place and are illustrative of the condition of the place components, including any locations containing disturbance or harm	<input type="checkbox"/>
20	Consult with the RAP(s) or Traditional Owners, record and provide their views	<input type="checkbox"/>
21	If artefacts are removed, record their new location details in an object collection component	<input type="checkbox"/>



Table 7. LDAD registration checklist

No.	Registration details	Completed
1	a) Record all individual locations of all artefacts	<input type="checkbox"/>
	b) Ensure the first entry in the artefact table matches the PGC	<input type="checkbox"/>
	c) Check using the <i>Show Map</i> function that all artefacts are in their expected locations	<input type="checkbox"/>
2	Record each artefact's basic diagnostic features	<input type="checkbox"/>
3	Record artefact subsurface depths	<input type="checkbox"/>
4	Review the subsurface testing program to assess whether it has sufficiently tested if greater artefact densities are present	<input type="checkbox"/>
5	Provide photo(s) of artefacts	<input type="checkbox"/>
6	Provide photo(s) of the area(s) where the artefacts were found that would aid in relocation of the artefacts and are illustrative of the condition of the place components, including any locations containing disturbance or harm	<input type="checkbox"/>



2 References

McDonald, R. C., & Isbell, R. F. (2009). Soil Profile. In T. N. Terrain, Soil and Land Survey Field Handbook (3rd Ed) (pp. 147-204). Melbourne: CSIRO Publishing.