



Jumping Creek

Queanbeyan, NSW

Cultural Heritage Assessment



March 2019



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Officer**

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EXECUTIVE SUMMARY

Jumping Creek is a new residential development on the eastern side of the new Ellerton Drive Extension in Queanbeyan, bounded by the Queanbeyan River on the southern side of the site. The current DP number is 1199045.

The proposed residential development, will be in accordance with Queanbeyan Palerang Regional Council's Planning Proposal for the site, including areas of the site set aside for environmental living, environmental conservation and public recreation uses.

The Jumping Creek project will be assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This report documents the results of an archaeological and cultural heritage assessment of Jumping Creek, Queanbeyan, NSW.

The report was commissioned by SPACELAB Studio Pty Ltd on behalf of PEET Limited.

The study area is located on the north eastern outskirts of Queanbeyan, immediately east of Greenleigh Estate. Queanbeyan is located in the Southern Tablelands of NSW. The land in question measures approximately 100 hectares. The whole of the project area is located in lot 5 DP 1199045.

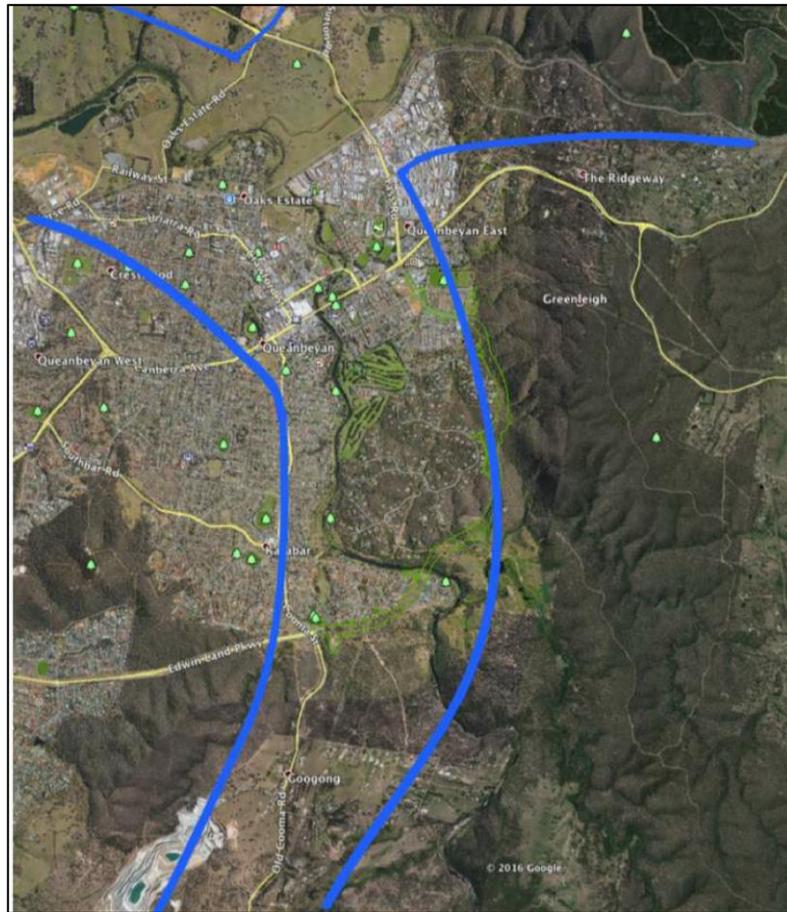
A total of 59 Aboriginal recordings are listed on the OEH AHIMS around the Jumping Creek study area. NSW Archaeology undertook an archaeological assessment for the proposed rezoning of Jumping Creek in 2009. A total of 29 Aboriginal object locales were recorded during that survey. Artefact locales were often found to cover reasonably large areas, due at least in part, to generally high levels of exposure and archaeological visibility.

The 2018 field visit recorded six new Aboriginal site locations, including five artefact locations and one scarred tree. Surface visibility in the area was high and large numbers of artefacts were noted in locales previously recorded.

An Aboriginal cultural heritage assessment for the Ellerton Drive Extension Project was undertaken by Waters Consultancy in 2016. That report identified Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A)) as a site of medium cultural heritage significance. It was a resource area and camping place associated with the pathway identified as Site B: Queanbeyan River Pathway Cultural Site. Additionally, Site B: Queanbeyan River Pathway Cultural Area (Site B), is identified as a site of high cultural heritage significance. It is a section of a traditional pathway that travelled along the Queanbeyan River.



Site A: Valley (jumping) Creek and Queanbeyan River Junction Resource Gathering and Camping Cultural Area (indicative Location) (Waters Consultancy 2016)



Site B: Queanbeyan River Pathway Cultural Site (indicative location) (Waters Consultancy 2016)

A total of 13 potential heritage items were recorded within the Jumping Creek study area by NSW Archaeology in 2009. These items are as follows:

JCH1 – Shearing shed complex (H3)

JCH2 – Mine shaft (H1)

JCH3 – Limestone quarry (H2)

JCH4 – Brick limekilns (H4)

JCH5 – Limestone quarries (H7)

JCH6 – Limekiln

JCH7 – Mine workings (H6)

JCH8 – Ore processing area (H5)

JCH9 – Miners' camp

JCH10 – Mine shafts

JCH11 – Domestic site

JCH12 – Building material dump (H9?)

JCH13 – Mine diggings

Items JCH1 (Shearing shed complex), JCH3 (Limestone quarry), JCH4 (Brick lime kilns), JCH5 (Limestone quarries), JCH6 (Lime kiln), JCH7 (Mine workings), JCH8 (Ore processing area), JCH9 (Miners' camp) and JCH11 (Domestic site) are assessed as having significance at a local level.

There is one item listed on the Queanbeyan Local Environmental Plan and on the NSW State Heritage Inventory as an archaeological site located within the current project area:

Greenleigh	Marchiori's Lime Kiln and quarry	South east corner of Jumping Creek	Part of Lot 1, DP 711905
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During the field assessment for the current project,

- additional locations for building material dumps were located, these have been included and mapped as part of previously recorded site JCH12; and
- an additional site location was recorded, JCH14.

All sites within the area currently defined as the "Developable Land" (see Figure 2.2) may be directly impacted by the project. As a detailed design has not been finalised the exact impact to each site cannot yet be defined. Additionally, the subsurface archaeological resource of the project area is not yet known, it is therefore recommended that as a first step a program of archaeological test excavation be undertaken.

Following this and following approval of a Development Application and Aboriginal Heritage Impact Permit (AHIP) at a minimum (but subject to the results of the test excavation programme), all Aboriginal objects that are to be directly impacted by the project should be the subject of an archaeological collection program.

Ten items of historical heritage are located within the "Developable Land" and may be subject to impacts from the project. Part of the Heritage Listed site Marchiori's lime kiln and quarry (JCH3 and JCH4) is within the developable land. Additionally, sites JCH1, JCH5, JCH6 JCH7 and JCH8 are within the "Developable Land" and have been assessed as meeting the criteria for local heritage listing. Sites JCH2, JCH12 and JCH14 are within the "Developable Land" but have been assessed as not meeting the requirements for heritage listing.

Recommendations:

Where possible, cultural heritage sites should be avoided by the proposed Jumping Creek development. Where this is not feasible the following management and mitigation strategies should be followed.

1. All Aboriginal sites within the study area are of cultural significance to the local Aboriginal community. Also, independent of archaeological sites and objects within the study area, Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A) is a resource area and camping place that has been identified as a site of medium cultural heritage significance. Additionally, Site B: Queanbeyan River Pathway Cultural Area is of high cultural significance. These cultural values should be taken into consideration when assessing the impacts of the proposal. Further consultation is required with RAPs on the form of impact mitigation for these areas.
2. A landscape based archaeological subsurface testing program should be developed in consultation with the RAPs, and conducted, prior to development impacts. Testing should be undertaken across all landforms within the project area that will be directly impacted. The aim: to ascertain the presence and archaeological significance of associated deposits.
 - i. If the archaeological deposits are identified and assessed to be of low scientific significance (at either a local or state level), no further archaeological works will be necessary prior to the granting of an AHIP and approval for development-related impacts.
 - ii. If the archaeological deposits are assessed to be of moderate to high significance (at either a local or state level), then a program of archaeological salvage will be required in order to retrieve the requisite amount of information from the site prior to approval for development related impacts.

A methodology is provided in Appendix 6 for this testing program.

3. Surface artefact collection should be conducted at all Aboriginal sites in the Jumping Creek study area prior to development impacts.
4. Site JC Scarred Tree 1 should be avoided by the project.
5. A return to country protocol or long-term management plan should be developed in consultation with the RAPs for any Aboriginal artefacts that are collected/salvaged during mitigation works associated with this project.
6. Archival recording should be conducted of historic sites within the project area assessed as locally significant. Archival recordings should be in form of detailed surveys for those items that will be impacted. In many cases this will necessitate substantial vegetation clearance prior to and during survey work. Depending upon the results of such investigations there may be the need for additional work in the form of salvage excavation at some or all of the heritage items.
7. Consideration should be given to incorporating the appropriate interpretation of the history and heritage of the area into the final project design.
8. The unanticipated discovery protocol outlined in Appendix 7 should be implemented for this project.

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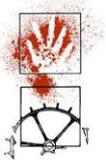
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Glossary

Aboriginal Object	means an object associated with Aboriginal people because of Aboriginal tradition (Heritage Act 2004).
Aboriginal Place	means a place associated with Aboriginal people because of Aboriginal tradition (Heritage Act 2004).

Aboriginal site	a place or location which relates to past or contemporary Aboriginal occupation. Sites can be divided into those identified from archaeological evidence (archaeological sites), and those related to intangible cultural values, such as revealed by oral tradition and lore, or from the historical record. An Aboriginal site may have both archaeological and intangible values.
AHIP	Aboriginal Heritage Impact Permit
archaeological site	a place or location with the confirmed presence of archaeological evidence of Aboriginal occupation, where the context of that evidence can be reliably related to the Aboriginal actions which produced the evidence.
artefact	an object, normally portable, made or modified by human hand (see 'stone artefact').
artefact occurrence	a term usually applied to site recordings comprising stone artefacts and which refers to one or more stone artefacts situated within a specified surface area or subsurface deposit. Various measures are used for defining the boundaries of such recordings. Refer also to 'surface' and 'subsurface artefact occurrence'.
artefact scatter	a formerly used open site-type classification defined as two or more stone artefacts situated no more than a specified distance (such as 60m) away from any other included artefact. Typically this category did not include isolated finds. The use of the term <i>scatter</i> was intended only to be descriptive and did not infer the original human behaviour which formed the site. The term <i>open camp site</i> has been used extensively in the past to describe open artefact scatters.
background discard or scatter	<p>There is no single concept for background discard or 'scatter', and therefore no agreed definition. The definitions in current use are based on the postulated nature of prehistoric activity, and often they are phrased in general terms and do not include quantitative criteria. Commonly agreed is that background discard occurs in the absence of 'focused' activity involving the production or discard of stone artefacts in a particular location. An example of unfocussed activity is occasional isolated discard of artefacts during travel along a route or pathway. Examples of 'focussed activity' are camping, knapping and heat-treating stone, cooking in a hearth, and processing food with stone tools.</p> <p>In practical terms, over a period of thousands of years an accumulation of 'unfocussed' discard may result in an archaeological concentration that may be identified as a 'site'. Definitions of background discard comprising only qualitative criteria do not specify the numbers (numerical flux) or 'density' of artefacts required to discriminate site areas from background discard.</p>
Developable Land	The portion of the project area that has been identified as developable for a residential estate by Queanbeyan Palerang Regional Council.

isolated find	a single stone artefact, not located within a rock shelter, and which occurs without any associated evidence of Aboriginal occupation within a specified radius, such as 60 metres (depending on which archaeological convention is used). Isolated finds may represent single discard events, be constituent components of background scatter, or be indicative of larger obscured, remnant and disturbed sites.
lithic assemblage (of stone)	a collection of whole and fragmentary stone artefacts and manuports obtained from an archaeological site, either by collecting items scattered on the present ground surface (see lithic scatter) or by controlled excavation (see also 'stone artefact').
OEH	NSW Office of Environment and Heritage
open camp site	a formerly used site type classification defined as an open context stone artefact occurrence (or artefact scatter), containing two or more artefacts situated no more than a specified arbitrary distance (such as 60 metres) away from any other included artefact. The term <i>open camp site</i> was based on ethnographic modelling suggesting that most artefact occurrences resulted from activities at camp sites. However, in order to separate the description from the interpretation of field evidence, both open camp sites and isolated finds are now referred to as <i>artefact occurrences</i> .
potential archaeological deposit (PAD)	A discrete location or area, defined spatially either by geomorphological, disturbance or administrative criteria, within which there is a predicted likelihood that subsurface archaeological material is present, and that this material would warrant archaeological investigation in order to determine its scientific, cultural, or statutory value and status.
RAPs	Registered Aboriginal Parties
study area	the area for which the assessment is being undertaken.



1. INTRODUCTION

1.1 Project Description

Jumping Creek is a new residential development on the eastern side of the new Ellerton Drive Extension in Queanbeyan, bounded by the Queanbeyan River on the southern side of the site. The current DP number is 1199045.

The site has a number of existing features including:

- Sloping lands heavily degraded by previous farming/industry uses;
- Former infrastructure associated with previous industry uses (mine sites);
- Remnant woodland vegetation communities to the boundaries of the site; and
- A currently weed infested and eroded creek (Jumping Creek) traversing the site and connecting into Queanbeyan River.

The proposed residential development, will be in accordance with Queanbeyan Palerang Regional Council's Planning Proposal for the site, including areas of the site set aside for environmental living, environmental conservation and public recreation uses.

Access to Jumping Creek will be from two proposed new access points off the Ellerton Drive extension.

The study area is approximately 100 hectares located within lot 5 DP 1199045, on the north eastern outskirts of Queanbeyan, immediately east of Greenleigh Estate. The boundaries of the study area are shown in Figure 1.1 and 1.2.

This report documents the results of an cultural heritage assessment of Jumping Creek.

The report was commissioned by SPACELAB Studio Pty Ltd on behalf of PEET Limited.

1.2 Study Aims

The aims of the study are to locate and assess any Aboriginal and historical sites/objects not previously recorded in the project area and to provide a first stage impact assessment for those sites.

1.3 Project Framework

The Jumping Creek project will be assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.4 This Report

1.4.1 Outline

This report:

- Describes the proposed development/works etc (Section 1);
- Provides a description of the study area (Section 2);
- Describes the methodology used in this assessment (Section 3);
- Describes consultation with Aboriginal people (Section 4);



- Provides a heritage context for the study area (Section 5 and 6);
- Describes the results of the current investigation (Section 7 and 8);
- Describes the cultural heritage values and significance statement of the study area (Section 9)
- Describes the proposed activity (Section 10);
- Provides actions to avoid and minimise harm (Section 11); and
- Provides management recommendations based on the results of the investigation (Section 12).

1.4.2 Restricted Information

Information in this report relating to the exact location of Aboriginal sites should not be published or promoted in the public domain without further consultation and agreement from the registered Aboriginal parties and in the context of an approved interpretation plan.

No information provided by Aboriginal stakeholders in this report has been specifically identified as requiring access restrictions due to its cultural sensitivity.

1.4.3 Confidentiality

No information in this report has been classified as confidential except in so far as outlined in section 1.4.2 above.



2. DESCRIPTION OF THE AREA

2.1 Location of proposed activity

The study area is located on the north eastern outskirts of Queanbeyan, immediately east of Greenleigh Estate. Queanbeyan is located in the Southern Tablelands of NSW. The land in question measures approximately 100 hectares. The topographic context of the study area is shown in Figure 2.1. The whole of the project area is located in lot 5 DP 1199045.

2.2 Environment

Jumping Creek is located within an enclosed valley drained by Jumping Creek and its ephemeral 1st and 2nd order tributaries. The Queanbeyan River forms part of the south western boundary Jumping Creek flows in a north westerly direction from the south eastern corner of the property and then commences an easterly meander before turning south at a rocky gorge. From the gorge the creek then flows to the west where it meets the Queanbeyan River. The majority of the creek flows through bedrock-based slopes. However, some alluvial flats are also present. It is an intermittent watercourse comprising a channel which varies in width to a maximum of 10 metres. The overall Jumping Creek catchment measures 4,000ha (Parsons Brinckerhoff Australia Pty Ltd 2008).

The geology present includes Colinton Volcanics dacitic tuff with interbedded siltstone and limestone, and Cappanana Beds siltstone and shale interbedded with limestone (Kuskie 1989).

The terrain is undulating and comprises crest, simple slope, lower slope and drainage depression/flat morphological landform elements. The slope gradient varies from steep to gentle.

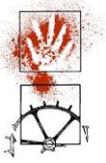
Vegetation across the property is dominated by exotics including various fruit and ornamental trees and shrubs and agricultural weeds. Land adjacent to the site contains mixtures of box-gum woodland, dry open forest and grassland woodland mosaic communities (Parsons Brinckerhoff Australia Pty Ltd 2008); prior to European clearance, similar communities are likely to have been present in the study area.

2.3 Aboriginal People's Use of the Landscape

The spatial patterning of archaeological sites found during heritage studies undertaken in Jumping Creek and Queanbeyan region, and in Canberra, indicate that there are no landscape types in this region that were not visited and occupied by Aboriginal people in the long period prior to European settlement.

Archaeological sites (artefact scatters and isolated artefacts being by far the most common site type) are scattered across a range of different landforms, and at varying distances from important landscape features like rivers and other water sources. The lack of any large areas that are devoid of prehistoric sites presumably reflects the availability of resources and the relatively variable nature of the ecology across the region and the consequent proximity and accessibility of different ecological zones.

Aboriginal people of the Limestone Plains (the Canberra and Queanbeyan Region) utilised the resources of the waterways throughout the region including a wide range of fish, freshwater shellfish, crayfish, tortoise, platypus, and aquatic birds including ducks, swans, and broilgas. Aboriginal people utilised a wide range of land-based resources, including animals such as kangaroos, wallabies, possums, wild turkeys, wallaroos, wombats, and emus. Lizards, snakes, echidnas, ants, grubs and bird eggs were also important resources. Other land-based resources that were utilised by Aboriginal people in the region included plant foods such as the yam daisy, wattle-seeds, orchid tubers, tree-fern trunks, berries and grass seeds and plants for bush medicine Wood was used to make boomerangs, spears, digging sticks, bark was used for canoes and shelters, fibre to produce string, and stone to make axes, grinding stones, and spear points. In the summer months there was also the "annual pilgrimage to the adjacent high country of the Bogong Mountains... and the Snowy Mountains (Avery 1994). In 1844 George Augustus Robinson on his travels through the region noted that, (Waters Consultancy Pty Ltd 2016)



The Natives of the Low Country and of the Mountains assemble in large numbers in the fine Season to collect the Boogong fly a species of Moth found in myriads in the higher Altitudes of the Mountains. They are extremely nutritious and the Natives subsist during the Season entirely upon them they are called Cori by the Omeo, and Boogong by the Yass Blacks: (Mackness 1941)

Every year people travelled from the mountains, the tablelands and the coast to gathering places on the fringes of the high country and then further up into the high country to the Boogong moths. These annual gatherings combined feasting on the rich resource of the moths with the holding of important ceremonial events. These gatherings continued well into the nineteenth century until the impacts of the European invasion, through disease and settlement, brought them to an end (Cootamundra Herald, 4 May 1920). (Waters Consultancy Pty Ltd 2016)

One of the most important resources for prehistoric groups, and one that is relatively easy to identify in the landscape, is water. The proximity of Jumping Creek to the Queanbeyan River provided stable sources of water year-round.

The geology of the region provides relatively plentiful sources of stone, suitable for the production of flaked or ground tools. Hills, spurs and ridgelines across the region have variable erosion on their crests that frequently exposes bedrock, which includes granite and other igneous rocks, hornfels and other metamorphic rocks, and quartz. Sedimentary rock is also present in the Canberra region, some of which takes the form of flakeable silcrete and mudstone.

Larger rivers in the region have transported pieces of rock down from the ranges, and large gravel-beds have been deposited in lower-lying areas. These gravel beds contain a sample of the region's geology and sometimes functioned as procurement areas where prehistoric groups could access stone. Most of the rock in these gravels is igneous or metamorphic, but pieces of sedimentary rock and fine-grained rocks such as chert are also present.

The variable distribution of different landforms near Jumping Creek would also have provided a variety of floral and faunal resources for prehistoric groups. The variation in elevation around Jumping Creek, with ranges to the east and west and undulating hills and plains across the Canberra area would have created a closely-spaced distribution of ecological zones that could have been exploited by mobile hunter-gatherer groups.

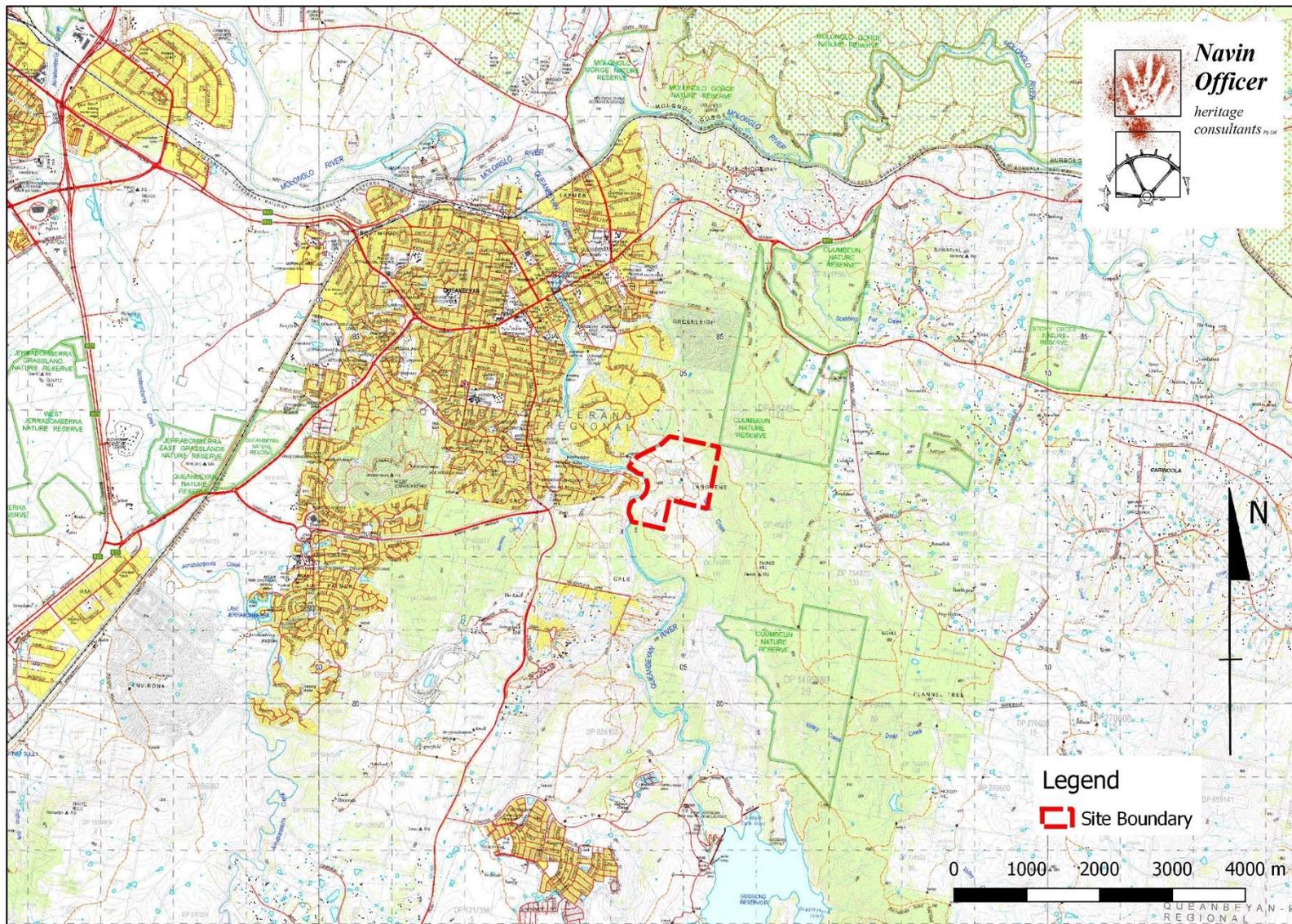


Figure 2.1 Jumping Creek Project Area Location

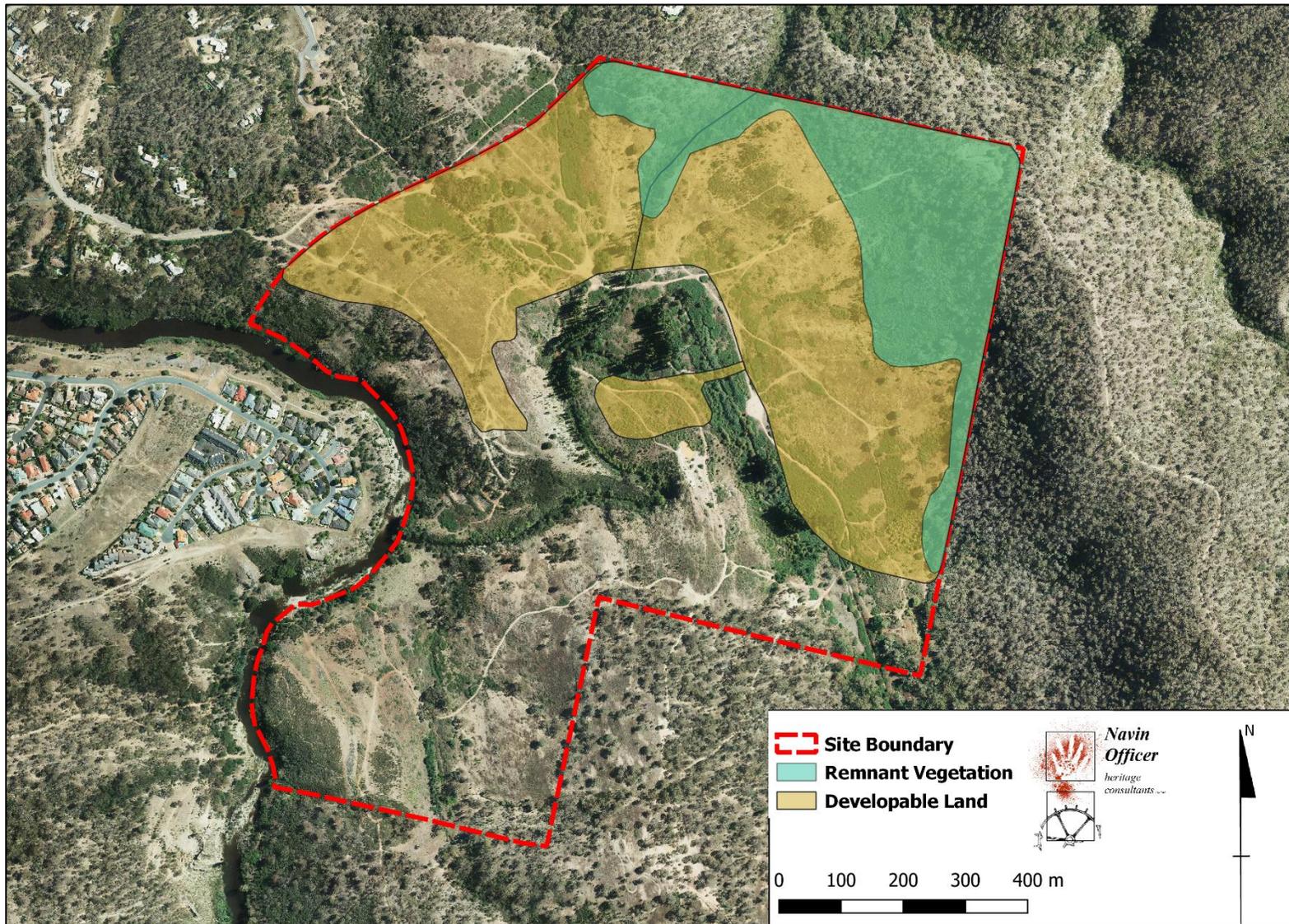
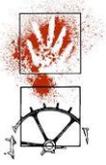


Figure 2.2 Indicative area of Developable Land within Jumping Creek (for latest plan refer to subdivision plan)



3. STUDY METHODOLOGY

3.1 Contributors

Field survey was carried out by archaeologists Nicola Hayes and Jasmine Fenyvesi (NOHC) with assistance from the Aboriginal representatives listed in Section 4.3.

This report was prepared by Nicola Hayes.

Nicola has a Bachelor of Arts/Science and a Graduate Diploma in Archaeology from the Australian National University (ANU) Jasmine has a Bachelor of Archaeological Practice from the ANU.

Internal review of this report was completed by Susan McIntyre-Tamwoy.

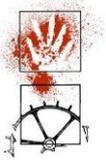
3.2 Literature and Database Review

A range of archaeological and historical data was reviewed for the Jumping Creek study area and its surrounds. This literature and data review were used to determine if known Aboriginal and historical sites were located within the area under investigation, to facilitate site prediction on the basis of known regional and local site patterns, and to place the area within an archaeological and heritage management context. The review of documentary sources included heritage registers and schedules, local histories, and archaeological reports.

Aboriginal literature sources included the Aboriginal Heritage Information Management System (AHIMS) maintained by the NSW Office of Environment and Heritage (OEH) and associated files and catalogue of archaeological reports. Sources of historical information included regional and local histories, heritage studies and theses; parish maps; and where available, other maps, such as portion plans.

Searches were undertaken of the following statutory and non-statutory heritage registers and schedules:

- Statutory Listings:
 - : Aboriginal Heritage Information Management System (AHIMS) (NSW OEH);
 - : Atlas of Aboriginal Places (NSW OEH);
 - : World Heritage List;
 - : The National Heritage List (Australian Heritage Council);
 - : The Commonwealth Heritage List (Australian Heritage Council);
 - : The State Heritage Register (NSW Heritage Branch, Office of Environment and Heritage);
 - : Heritage Schedule(s) from the Queanbeyan Local Environmental Plan 2012.
- Non-Statutory Listings:
 - : The State Heritage Inventory (NSW Heritage Branch, Office of Environment and Heritage);
 - : The [former] Register of the National Estate (Australian Heritage Council);
 - : Register of the National Trust of Australia (NSW);



3.3 Field Methodology

Field survey of the project area was undertaken on 17 September 2018 and an additional field visit was undertaken on 9 October 2018.

The archaeological field survey was completed on foot by 5-8 people walking selected traverses, spaced a regular distance apart such as between approximately 5-50 m apart. Extra focus was applied to locations of already recorded sites or PADs and areas yielding high ground surface visibility/exposures.

Aboriginal field participants were encouraged to communicate knowledge regarding the cultural heritage values of the study area, archaeological and cultural sites, and the overall landscape. The project team consulted with the Aboriginal community in order to conduct the cultural assessment program in a culturally sensitive manner, and have treated all information provided with respect. No material was identified by the Aboriginal participants as confidential.

3.3.1 Site Recording

All encountered surface archaeological objects, sites, potential archaeological deposits and places of Aboriginal cultural value were documented. All sites had the following details recorded using standardised recording forms:

- Site name, recorder and date
- Site type
- GPS coordinates
- Landscape and landform character
- Context information – cultural/spiritual location, proximity to other objects/sites etc
- Site dimensions
- Site condition and potential to be larger
- Site content including numbers and artefact types, raw materials and detailed recording of a sample of artefacts.
- Photos
- Any other relevant information, such as oral information and informant details.

3.4 Sampling Strategy

The project aimed to undertake a sampling survey of the area identified by Queanbeyan Palerang Regional Council as “Developable Land” (see Figure 2.2). The sampling strategy was completed in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCEW 2010) and included the inspection of all landforms (and all individual instances of that landform) located within the ‘developable land’. It was assumed that all land within the area identified as ‘developable land’ would be impacted.

3.5 Recording Parameters

3.5.1 Aboriginal Sites and PADs

The archaeological survey aimed to identify material evidence of Aboriginal occupation as revealed by surface artefacts and areas of archaeological potential without surface artefacts. Potential recordings fall into two broad categories: sites and potential archaeological deposits.

Sites

A site is defined as any material evidence of past Aboriginal activity that remains within a context or place which can be reliably related to that activity.



Most Aboriginal sites are identified by the presence of three main categories of artefacts: stone or shell artefacts situated on or in a sedimentary matrix, marks located on or in rock surfaces, and scars on trees.

Frequently encountered site types within south-eastern Australia include stone artefact occurrences - including isolated finds and open artefact scatters, coastal and freshwater middens, rock shelter sites - including occupation deposit and/or rock art, grinding groove sites and scarred trees. For the purposes of this section, only the methodologies used in basic site identification are outlined, together with those for recording types encountered by this investigation.

Stone Artefact Occurrences

Stone artefact occurrences are the most commonly recorded site type in Australia. They may consist of single artefacts - described as isolated finds; or as a distribution of more than one artefact – often described as an artefact scatter or ‘open camp site’ when recording surface artefacts, or as a subsurface artefact distribution when dealing with an archaeological deposit.

Where artefact incidence is very low, either in terms of areal distribution (artefacts per square metre) or density (artefacts per cubic metre), then the differentiation of the recording from background artefacts counts or *background scatter* may be an issue.

Isolated finds

An isolated find is a single stone artefact, not located within a rock shelter, and which occurs without any associated evidence of Aboriginal occupation within a radius of 60 metres. Isolated finds may be indicative of:

- Random loss or deliberate discard of a single artefact;
- The remnant of a now dispersed and disturbed artefact scatter; and
- An otherwise obscured or sub-surface artefact scatter.

Except in the case of the latter, isolated finds may be considered to be constituent components of the *background scatter* present within any particular landform.

The distance used to define an isolated artefact varies according to the survey objectives, the incidence of ground surface exposure, the extent of ground surface disturbance, and estimates of *background scatter* or *background discard* densities. In the absence of baseline information relating to background scatter densities, the defining distance for an isolated find must be based on methodological and visibility considerations. Given the varied incidence of ground surface exposure and deposit disturbance within the study area, and the lack of background baseline data, the specification of 60 metres is considered to be an effective parameter for surface survey methodologies. This distance provides a balance between detecting fine scale patterns of Aboriginal occupation and avoiding environmental biases caused by ground disturbance or high ground surface exposure rates. The 60 metre parameter has provided an effective separation of low density artefact occurrences in similar southeast Australian topographies outside of semi-arid landscapes.

Background scatter

Background scatter is a term used generally by archaeologists to refer to artefacts which cannot be usefully related to a place or focus of past activity (except for the net accumulation of single artefact losses).

There is no single concept for background discard or 'scatter', and therefore no agreed definition. The definitions in current use are based on the postulated nature of prehistoric activity, and often they are phrased in general terms and do not include quantitative criteria. Commonly agreed is that background discard occurs in the absence of 'focused' activity involving the production or discard of stone artefacts in a particular location. An example of unfocused activity is occasional isolated discard of artefacts during travel along a route or pathway. Examples of 'focused activity' are camping, knapping and heat-treating stone, cooking in a hearth, and processing food with stone tools. In practical terms, over a



period of thousands of years an accumulation of 'unfocused' discard may result in an archaeological concentration that may be identified as a 'site'. Definitions of background discard comprising only qualitative criteria do not specify the numbers (numerical flux) or 'density' of artefacts required to discriminate site areas from background discard.

Artefact scatters

Artefacts situated within an open context are classed as an open artefact scatter (or 'open camp site') when two or more occur no more than 60 metres away from any other constituent artefact. The 60 metre specification relates back to the definition of an isolated find (*refer above*). The use of the term *scatter* is intended only to be descriptive of the current archaeological evidence and does not infer the original human behaviour which formed the site. The term *open camp site* has been used extensively in the past to describe open artefact scatters. This was based on ethnographic modelling suggesting that most artefact occurrences resulted from activities at camp sites. However, in order to separate the description from the interpretation of field evidence, the terms *artefact scatter*, *artefact distribution* or *artefact occurrence* are now more extensively used. The latter two options can also be used to categorise artefacts occurring in sub-surface contexts.

Potential Archaeological Deposits

A potential archaeological deposit, or PAD, is defined as any location where the potential for subsurface archaeological material is considered to be moderate or high, relative to the surrounding study area landscape. The potential for subsurface material to be present is assessed using criteria developed from the results of previous surveys and excavations relevant to the region. Where necessary, PADs can be given an indicative rating of their 'archaeological potential' based on a combined assessment of their potential to contain artefacts, and the potential archaeological value of the deposit. Table 3.1 illustrates the matrix on which this assessment is based. Locations with low potential for artefacts fall below the threshold of classification. In such cases the potential incidence of artefactual material is considered to be the same as, or close to that for background scatter. Where there is moderate potential for artefacts, the predicted archaeological potential parallels the potential significance of the deposit. For deposits with high potential for artefacts, the assessed archaeological potential is weighted positively.

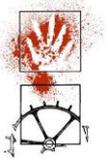
The boundaries of PADs are generally defined by the extent of particular micro-landforms known to have high correlations with archaeological material. A PAD may or may not be associated with surface artefacts. In the absence of artefacts, a location with potential will be recorded as a PAD. Where one or more surface artefacts occur on a sedimentary deposit, a PAD may also be identified where there is insufficient evidence to assess the nature and content of the underlying deposit. This situation is due mostly to poor ground surface visibility.

Table 3.1 Matrix showing the basis for assessing the archaeological potential (shown in bolded black text) of a potential archaeological deposit.

		Potential to contain Aboriginal objects		
		<i>Low</i>	<i>Moderate</i>	<i>High</i>
Potential archaeological significance	<i>Low</i>	---	low	moderate
	<i>Moderate</i>	---	moderate	high
	<i>High</i>	---	high	high

3.5.2 Historical Sites and Features

Historical archaeology refers to the 'post-contact' period and includes: domestic, commercial and industrial sites as well as maritime sites. It is the study of the past using physical evidence in conjunction with historical sources. The three primary types of places or items that may form part of the historical archaeology context include:



1. Below ground evidence, including building foundations, occupation deposits, features and artefacts; and above ground evidence, including buildings, works, industrial structures and relics that are intact or ruined;
2. Areas of land that display evidence of human activity or occupation; and
3. Shipwrecks, deposits and structures associated with maritime activities.

Within these broad parameters, an historical archaeological site may include:

- Topographical features and evidence of past environments (that is, resident in pollens and diatoms);
- Evidence of site formation, evolution, redundancy and abandonment (that is, features and materials associated with land reclamation, sequences of structural development, demolition/deconstruction, and renewal);
- Evidence of function and activities according to historical theme/s represented (for example, an industrial site may contain diagnostic evidence of process, products and by-products);
- Evidence associated with domestic occupation including household items and consumables, ornaments, personal effects and toys;
- Evidence of diet including animal and fish bones, and plant residues;
- Evidence of pastimes and occupations including tools of trade and the often fragmentary signatures of these activities and processes;
- Methods of waste disposal and sanitation, including the waste itself which may contain discarded elements from all classes of artefact as well as indicators of diet and pathology; and
- Any surviving physical evidence of the interplay between site environment and people.

The information found in historical archaeological sites is often part of a bigger picture which offers opportunities to compare and contrast results between sites. The most common comparisons are made at the local level, however, due to advances in research and the increasing sophistication and standardization of methods of data collection, the capacity for wider reference (nationally and, occasionally, internationally) exists and places added emphasis on identification and conservation of historical archaeological resources.



4. CONSULTATION PROCESS

The *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW DECCW 2010) sets out the requirements for 'consulting with those Aboriginal people who can provide information about the significance of Aboriginal cultural heritage as part of the heritage assessment process that informs any AHIP application' (ibid:1).

The requirements apply to all activities throughout NSW that have the potential to harm Aboriginal *objects* or places and that also require an AHIP. The requirements specify four stages of consultation:

Stage 1 - notification of project proposal and registration of interest

Stage 2 - presentation of information about the proposed project

Stage 3 – gathering information about cultural significance

Stage 4 – review of draft cultural heritage assessment report

See Appendix 1 for all consultation records.

4.1 Stage 1

An advertisement was placed in the:

- Queanbeyan Age which invited registration of interest by the 31st July 2018

Letters were sent to the:

- Ngambri Local Aboriginal Land Council;
- Queanbeyan Palerang Regional Council (QPRC);
- South East Local Land Services;
- NSW OEH;
- Native Title Services Corporation Ltd; and
- Office of the Registrar Aboriginal Land Rights Act 1983.

A search was made of the National Native Title Tribunal registers on 11 July 2018.

Following advice received from OEH and QPRC and the Native title Search results, letters were sent to all groups/individuals identified. The closing date for expressions of interest was 7 August 2018. Registrations of interest were received from the following Aboriginal parties:

Ngambri Local Aboriginal Land Council	Buru Ngunawal Aboriginal Corporation	Goobah
		Cullendulla
Murra Bidgee Mullangari Aboriginal Corporation	Didge Ngunawal clan	Murramarang
	Ngunawal consultancy	
Thunderstone Aboriginal Cultural and Land Management Services	Ngunawal Elders Corporation	Gulaga
		Biamanga
Gunjeewong Cultural Heritage Aboriginal Corporation	Ms Lavinus Ingram	Nirrummurrin
	Mr Robert Monaghan	
Karlari Ngunawal Pajong Wallabalooa Descendants	Mr Carl Brown	Muragadi
Corroboree Aboriginal Corporation	Merrigarn	



4.2 Stage 2 and 3

A copy of the methodology and cultural information request was sent to registered groups on 8 August 2018.

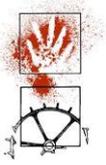
Table 4.1 Responses to Submissions - Methodology

Date	Type of Contact (email, phone etc)	Group/Individual	Comment
20/8/18	email	Muragadi	Endorse recommendations
20/8/18	email	Murra Bidgee Mullangari Aboriginal Corporation	Endorse recommendations
20/8/18	email	Merrigarn	Agrees with the information
2/9/18	email	Buru Ngunawal Aboriginal Corporation	that the proposed methodology is the normal practice but given the large number of site impacts would like to undertake a consultation process in the overall planning practice to try and preserve some of those sites, <i>i.e. landscape architecture</i> , instead of the usual salvage and destroy. In essence BNACC is in agreement with the methodology but would like to seek an alternative approach for a better outcome for our quite significant cultural presence in this area

4.3 Field Participation

The following representatives participated in the site visit:

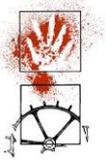
Jayden Channell (Ngunawal consultancy)	Luke Beard (Muragadi)
Piero Delponte (Ngunawal consultancy)	Shaun Carroll (Merrigarn)
Sonia Shea (Thunderstone)	Arnold Williams (Ngambri Local Aboriginal Land Council)
Mike Skinner (Corroboree Aboriginal Corporation)	Wally Bell (Buru Ngunawal Aboriginal Corporation)
Robert Monaghan	Cherie Carroll-Turrise (Gunjeewong Cultural Heritage Aboriginal Corporation)
David Williams (Karlari Ngunawal Pajong Wallabalooa Descendants)	
Kody (Didge Ngunawal clan)	
Edward Furaki (Murra Bidgee Mullangari Aboriginal Corporation)	



4.4 Stage 4

A draft copy of this report will be provided to the registered Aboriginal parties (RAPs) for their input and comment. Two responses were received, both in support of the recommendations.

Date	Type of Contact (email, phone etc)	Group/Individual	Comment
5/12/18	email	Merrigarn	agrees with this recommendations
7/12/18	email	Corroboree Aboriginal Corporation	no issues with the project and agree with your report



5. BACKGROUND INFORMATION

5.1 Aboriginal history

Tribal boundaries within Australia are based largely on linguistic evidence and it is probable that boundaries, clan estates and band ranges were fluid and varied over time. Consequently 'tribal boundaries' as delineated today must be regarded as approximations only, and relative to the period of, or immediately before, European contact. Social interaction across these language boundaries appears to have been a common occurrence.

A reconstruction of clan boundaries based on Tindale (1940, 1974) indicates that the south Canberra/Queanbeyan area was close to the tribal boundaries of the Ngunawal and Walgalu people. Horton's (1994) map shows the Ngarigo tribe in the southern Canberra area.

There is some uncertainty as to which language it was that was spoken by the Aboriginal people of Canberra/Queanbeyan. The area appears to have been close to the linguistic boundary between the Gundungurra and Ngunawal languages. Eades (1976) notes that published grammars for these two languages (Mathews 1900, 1901, 1904) are virtually identical. It has been communicated to NOHC that there is convincing evidence that the Ngunawal people had and still retain their own language with some words being shared with the Ngarigo and Gundungurra peoples for ceremonial and trade purposes (Glen Freeman, pers. comm.).

References to the traditional Aboriginal inhabitants of the Canberra/Queanbeyan region are rare and often difficult to interpret (Flood 1980, Huys 1993). The consistent impression however is one of rapid depopulation and a desperate disintegration of a traditional way of life over little more than fifty years from initial white contact (Officer 1989). The disappearance of the Aboriginal people from the tablelands was probably accelerated by the impact of European diseases which may have included the smallpox epidemic of 1830, influenza, and a severe measles epidemic by the 1860's (Flood 1980, Butlin 1983).

Ceremonial gatherings are known to have occurred in the Queanbeyan area with local documentary records describing annual visits by Aboriginal people as late as the 1850s. Wright (1923) mentions the current showground reserve as one of several sites used by Aboriginal people to camp and hold corroborees (BIOSIS 2007) and is suggested to have been a traditional favoured camping ground and gathering place (Williams and Feary 1989). The showground area was the site of 'The Last Aboriginal Corroboree' held in the Queanbeyan district, lasting 'many weeks' and attended by 'many hundreds' including participants from the coast and regions of the lower Lachlan and Murrumbidgee rivers (Williams and Feary 1989).

Early accounts of Aboriginal lifestyles in areas comparable with the study locality describe aspects of a successful hunting and gathering economy, an eventful social life, and inter-group contacts. The material culture, which is partly reflected in the surviving archaeological record, included stone and wooden artefacts, skin clothing and bark and bough temporary dwellings.

Records indicate that a wide range of resources were exploited. Possums were available all year round within the wooded ranges of the ACT region: their skins were used for warmth (Bluett 1954). Smooth river cobbles area recorded as being used to grind up roasted Bogong moths during the production of 'moth cakes' (Flood 1996). A localized method of fishing was recorded by Shumack (1967:151) who described Aboriginal people working together to drive fish to the end of a waterhole where they could be speared en-masse. Other observed activities include woodworking, food preparation and skin scraping activities with the use of a range of implements including digging sticks, bark vessels, hafted axes and a variety of flaked artefacts (Flood 1996:25-27). Wooden implements such as clubs, boomerangs and shields are recorded, as well as hammocks, nets, ropes, string bags, bone awls as well as the construction of bark huts (Flood 1980:25-26).

Food resources observed ethnographically include possum, kangaroos, wallabies, emus, reptiles, flying squirrel, fish, mussels, Bogong moths, yams, berries and wide range of seeds and plants (Throsby in Bennett 2003:173; Bluett 1954:5).



Estimates of Aboriginal population sizes when the Queanbeyan area was first settled by Europeans are difficult to establish, due to a general lack of comment by the early explorers regarding native sightings. Lea-Scarlett attributes this to the native population purposefully avoiding the European settlers (1968:21). Observations made by Alan Cunningham, an early explorer of the region who was struck by the absence of signs of native occupation tend to support Lea-Scarlett's argument.

Wright estimated a population of approximately 400-500 Aborigines practicing a traditional lifestyle in the area in 1850. However, inevitably, the traditional patterns of land use and resource exploitation would have been impeded by the arrival of European settlers in the early 1800s, restricting access to various resources and introducing diseases such as smallpox and influenza (Flood 1980). So great was the European impact on traditional Aboriginal society that within a few years, most aspects of traditional life had disintegrated and only a small group, including a number of children of mixed descent, remained by 1862 (Lea-Scarlett 1968).

By the 1850s the traditional Aboriginal economy had largely been replaced by an economy based on European commodities and supply points. Reduced population, isolation from the most productive grasslands, and the destruction of traditional social networks meant that the final decades of the region's indigenous culture and economy was based around white settlements and properties (Officer 1989).

By 1856 the local 'Canberra Tribe', presumably members of the Ngunawal or Ngarigo, were reported to number around seventy (Schumack 1967) and by 1872 recorded as only five or six 'survivors' (Goulburn Herald 9 Nov 1872). In 1873 one 'pure blood' member remained – she was known to the white community as Nelly Hamilton or 'Queen Nellie'. The disappearance of a population of pure blooded Aboriginal people from an area does not, of course, mean that the area was then devoid of an Aboriginal population.

5.1.1 Areas of Identified Cultural Significance

An Aboriginal cultural heritage assessment for the Ellerton Drive Extension Project was undertaken by Waters Consultancy in 2016. This report identified Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A) as a site of Medium Significance as a resource area and camping place associated with the pathway identified as Site B: Queanbeyan River Pathway Cultural Site. Additionally, Site B: Queanbeyan River Pathway Cultural Area (Site B) is identified as a site of High Significance as a section of a pathway that travelled along the Queanbeyan River. This pathway was part of an interconnected series of pathways that linked the coastal area to the tablelands and then into the highlands.

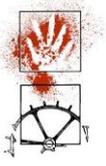


Figure 5.1 Site A: Valley (jumping) Creek and Queanbeyan River Junction Resource Gathering and Camping Cultural Area (indicative Location) Waters Consultancy 2016

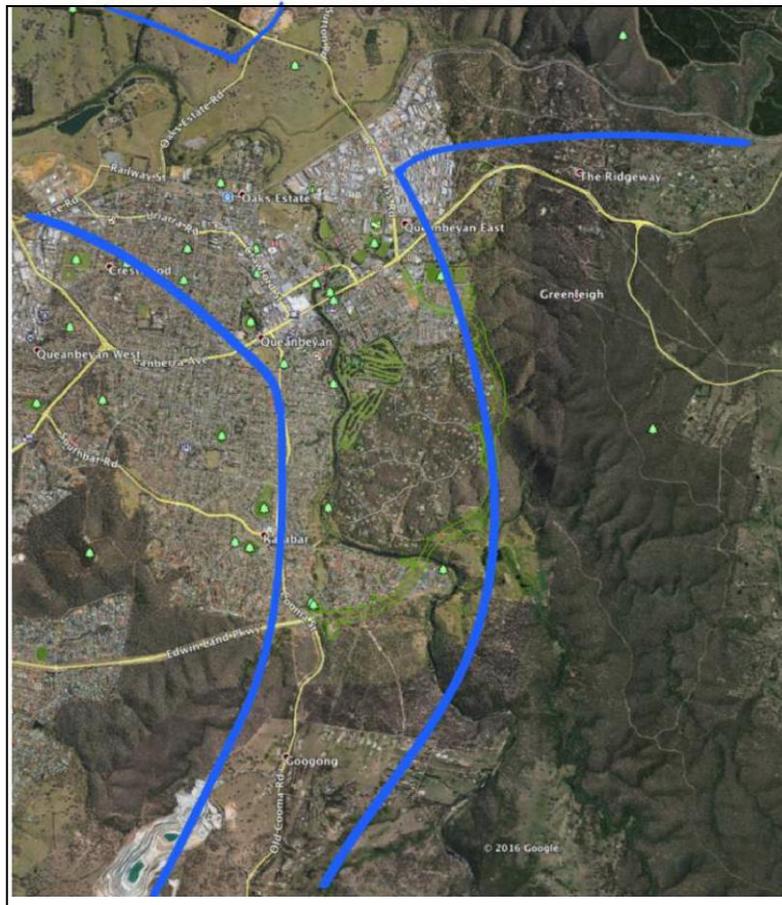


Figure 5.2 Site B: Queanbeyan River Pathway Cultural Site (indicative location) (Waters Consultancy 2016)



5.2 Material evidence of Aboriginal land use

5.2.1 Regional overview

Stone artefact scatters are the most frequently occurring residues of prehistoric activity in the region. They may range considerably in size and density, factors that are often interpreted as an indication of intensity of the Aboriginal landuse. As well, they provide insight into stylistic and technological behavior. Such scatters are representative of one or more stages in what is termed a 'reduction sequence'. That is, the entire process from obtention of stone raw material, to manufacture of stone tools and to eventual discard or loss and incorporation into the archaeological record. Isolated finds are artefacts that occur without any apparently associated archaeological materials or deposit. Open scatters are defined as spatially concentrated occurrences of two or more flaked stone artefacts.

Broad distinctions may be made between sites formed as a result of general living and habitation activities and sites located in response to the fixed locations of specific resources. Occupation sites relating to the former activities are most commonly recognized by the discard of flaked stone materials in sedimentary deposits. Subsequent processes of erosion or landuse may deflate or section these sediments to reveal surficial or embedded (sometimes stratified) materials. Sites formed as a result of resource location may be recognized by a range of features including the proximity of discarded stone materials to source stone materials and characteristic extraction and use marks upon stone or wood materials, that is, procurement sites, hatchet grinding grooves and scarred trees.

The wider regional pattern of Aboriginal occupation site occurrence within the Queanbeyan region is one of higher site size and frequency in areas proximate to major permanent creek lines with a reduction in site size and frequency around less permanent water sources. Whilst sites have been found to occur throughout topographic and vegetational zones there is a tendency for more of the larger sites to be located in proximity to creeks, wetlands and proximate parts of valley floors. A trend for larger sites to be near major water sources, but avoiding frost drainage hollows, was noted at a regional level by Flood (1980). Elsewhere in the Queanbeyan region high site and artefact frequencies have also been correlated with the geographic occurrence of specific resources particularly, stone procurement outcrop locations.

5.2.2 The project area

59 Aboriginal recordings are listed on the OEH AHIMS for the area around the Jumping Creek study area defined as the area within co-ordinates: GDA, Zone: 55, Eastings: 704243 - 705501, Northings: 6082383 - 6083642 with a Buffer of 200 meters (Figure 5.3). All sites are open artefact scatters with one recorded PAD. A copy of the AHIMS search is provided in Appendix 2.

Numerous archaeological investigations have been carried out in the Queanbeyan region. Larger scale, research-orientated projects include Flood (Jumping Creek - 1980), Trudinger (Pialligo 1989) and Kuskie (Jumping Creek - 1989). However, most investigations have involved relatively small area surveys necessitated by proposed developments (e.g. Access Archaeology 1991, Boot & Heffernan 1989, Navin & Officer 1990, Williams 1992, Winston Gregson 1989, Navin Officer 2004). These studies provide local contextual and site location data for the study area.

Surveys in the vicinity of the Queanbeyan River include Gale Precinct, Jumping Creek and south Jumping Creek. The results of these surveys indicate a relatively high site density for areas immediately adjacent to the Queanbeyan River. Boot and Bulbeck, in a review of studies carried out on the Molonglo and Queanbeyan River systems noted that most sites were located on 'fairly level ground, particularly on river flats, terraces and ridges leading to water courses' (Boot and Bulbeck 1990:19).

During their preliminary archaeological survey of Jumping Creek, Boot and Heffernan (1989) sought to locate and record Aboriginal archaeological sites within an area of 100 hectares known as the Jumping Creek Development Proposal. 20 sites were located, and it was found that large and dense artefact scatters are concentrated around the confluence of Jumping Creek with its northern tributary. Smaller and less dense sites occur on the central ridge and lower slopes of hills in the north-western boundary. The current study area is included in this study



Although Kuskie's 1989 research orientated approach to a study of the same 100 hectares of Jumping Creek had substantially different aims to those of Boot and Heffernan's project, the findings of both were similar in many respects (Boot and Kuskie 1996:23-27). That study also encompassed the current study area (the northwestern part of Lot 1 DP 711905) and recorded one small artefact scatter (JVC6) in that area.

In 1995 Klaver undertook a summary of all archaeological sites identified along the proposed route of the Queanbeyan bypass. She concluded that patterns of site occurrence in Queanbeyan are 'largely restricted to open scatters of stone artefacts, isolated artefacts and scarred trees. There is an apparent trend for Aboriginal archaeological sites to be located on ridgelines and spurs, particularly where they lead to permanent water or along river flats. Approximately 65 percent of recorded Aboriginal activity (including artefact scatters, isolated finds and scarred trees) occurs on ridgelines and spurs. Approximately 21 percent of site activity occurs on gentle slopes and the remaining 14 percent occurs on flats and creek sides. Relatively unusual but extremely large sites have also been documented in the alluvial sand deposits adjacent to the Molonglo River' (Klaver 1995:12).

Navin Officer Heritage Consultants (2004) undertook an archaeological survey of part Lot 1 DP 711905, Jumping Creek. Three Aboriginal sites (designated Jumping Creek 1 - JC1, Jumping Creek 2 - JC2, and Jumping Creek Valley 6 - JCV6) were known to exist in the study area prior to the 2004 field survey. The archaeological survey confirmed the location of two of the three recorded Aboriginal sites - Jumping Creek 2 (JC2) and Jumping Creek Valley 6 (JCV6) and identified a further two Aboriginal sites - Jumping Creek 21 (JC21) and Jumping Creek 22 (JC22), and one area of potential archaeological deposit. A resurvey of this site was undertaken by Navin Officer in 2009. As in a previous survey in 2004, JC2 was not re-located. One artefact from site JC21 was re-located.

The Jumping Creek Estate was again reassessed as part of a desktop study (Saunders 2007). The study concluded that despite being rich in Aboriginal sites, the recent archaeological investigations in the broader Queanbeyan region show that it is not unique in the region and that its significance may initially have been overstated.

NSW Archaeology undertook an archaeological assessment for the proposed rezoning of Jumping Creek in 2009. Artefact locales were recorded in all Survey Units except SU8, SU14 and SU16. A total of 29 Aboriginal object locales were recorded during the survey. The majority of previously recorded sites were relocated during the survey. The exception to this includes JC5 (similarly [Kuskie 1989] did not relocate this site), JCV3 and JC20. A number of Aboriginal object locales were found in areas in which sites had not previously been located. These Aboriginal object locales include SU2/L2, SU2/L3, SU2/4, SU3/L1, SU6/L1, SU10/L1, SU10/L2, SU11/L1, SU15/L1, SU15/L2, SU15/L3, SU15/L4, SU18/L1 and SU18/L2. Artefact locales were often found to cover reasonably large areas, a factor at least in part, of generally high levels of exposure and archaeological visibility. In addition, artefact density in locales was found to be generally low; this result also corresponds to the results obtained by Boot and Heffernan (1989) and Kuskie (1989). Table 5.1 below details the sites recorded as part of this assessment.

Only three Survey Units have been assessed to have the potential to contain subsurface deposit (Survey Units 16 and 18). Survey Unit 9 is assessed to possibly contain undisturbed deposit however it is located outside the proposed impact area. The remainder are assessed to possess low to negligible potential to contain subsurface deposit given the skeletal nature of the soils, erosion to bedrock and high levels of prior disturbance.

In 2009 Navin Officer were engaged to undertake a heritage assessment before carrying out badly needed remediation and erosion works on an eroding hillside of Jumping Creek. The study relocated four existing artefact scatters (JC12, JC14, JCR1 and JCR2), however sites JC13 and JC1 were unable to be relocated. The study determined that sites JC12 and JC14 were in fact part of the one large, low density scatter extending over the crest and upper slopes of a spur. The scatter comprised at least 24 artefacts extending over a large area, consisting of flakes and flaked pieces made from silcrete, volcanics and quartz.

A program of artefact salvage was recommended for all three of the relocated sites, which was undertaken in November 2010 with the contents of all three sites salvaged and reburied together at location 57-2-0683.



CHMA (2015) undertook an Aboriginal Cultural Heritage assessment and ACHAR for the Ellerton Drive Extension. The Ellerton Drive Extension runs along the eastern border of Jumping Creek. A further six sites were identified including four open artefact scatters (sites ED1, ED3, ED5 and ED6) and two isolated finds (ED2 and ED4). Two of these sites form part of a larger site complex (ED4 and ED5).

To date, no subsurface test excavation program has been undertaken within or in the vicinity of Jumping Creek.

Table 5.1 Sites Recorded by NSW Archaeology 2009

SU#	Eastings	Northing	Area Sq. m	Exposure	Exposure %	Visibility %	Previous recordings	Artefacts
SU1	704442	6083293	6257	bare earth vehicle erosion continuous	70	80	JC9 JCV4 JCV5	101
SU1	704614	6083124	4901	bare earth vehicle erosion continuous	60	80	JC12 JC13 JC14 JCV1 JCV2	7
SU2	705183	6082958	1073	vehicle 4 m wide	95	90	Possibly JCV14	12
SU2	705247	6083037	225	bare earth vehicle erosion continuous	80	90	Nil	6
SU2	705222	6083049	5	bare earth continuous	50	60	Nil	4
SU2	705177	6083046	1	bare earth continuous	50	80	Nil	2
SU2	705149	6083149	2500	bare earth vehicle erosion continuous	50	90	JC8 JCV13	8
SU3	705131	6083344	1	bare earth continuous	30	80	Nil	2
SU4	705154	6083423	1927	bare earth vehicle erosion continuous but mostly on track	40	80	JC6 JCV9	23
SU5	704961	6083373	4138	bare earth vehicle erosion continuous	70	90	JC6 JCV10 JCV11	89
SU6	705027	6083305	100	vehicle 60 x 4 m	90	90	Nil	4
SU6	705029	6083225	1600	bare earth vehicle erosion	60	60	JC7 JCV12	8
SU7	704597	6083396	8484	bare earth vehicle erosion continuous	20	80	JC3 JC4 JCV7 JCV8	188
SU9	704424	6083408	200	bare earth vehicle erosion continuous	80	30	JC1	5
SU10	704686	6083528	900	bare earth erosion continuous	50	90	Nil	5
SU10	704724	6083445	100	bare earth bike track	60	90	Nil	2

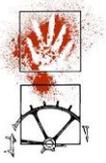


SU#	Easting	Northing	Area Sq. m	Exposure	Exposure %	Visibility %	Previous recordings	Artefacts
SU11	704842	6083459	1600	bare earth erosion continuous	80	90	Nil	7
SU12	704790	6083311	400	bare earth vehicle erosion	90	90	JC4 JCV8	30
SU13	705028	6082808	1	bare earth continuous	50	70	JCV15	1
SU13	704960	6082792	900	bare earth vehicle erosion continuous	60	90	JC19 JCV16	10
SU15	704461	6082470	1	bare earth continuous	60	60	Nil	1
SU15	704402	6082703	1	bare earth continuous	70	90	Nil	1
SU15	704505	6082657	1	animal	80	90	Nil	1
SU15	704535	6082789	225	bare earth erosion continuous	80	20	Nil	4
SU17	704911	6083072	12853	bare earth vehicle erosion arch visibility only on tracks	80	80	JC15 JC16 JC17 JC18 JCV17 JCV18 JCV19 JCV20	82
SU18	704905	6083286	30	vehicle erosion continuous	90	90	Nil	3
SU18	704910	6083267	20	erosion at edge of bank	50	90	Nil	2
SU19	704604	6082935	4	erosion continuous	80	80	JC11 JCV1	2
SU19	704338	6083269	1	bare earth continuous	40	90	JC10	2

5.3 Site Location Model

As a result of the numerous archaeological surveys undertaken to date in the local area, qualitative observations regarding Aboriginal site location parameters may be summarised as follows:

- The most commonly recorded site types are low-density surface scatters of stone artefacts. Artefact densities in open artefact scatters may vary considerably;
- Open artefact scatters are most likely to occur on relatively level ground in locally well-drained contexts, either spur line crests, terraces or elevated creek banks in valley floor contexts, low gradient crests and streamline banks in mid valley slope contexts, and level crests, shoulders and saddles on major ridgelines and spurs;
- The majority of open artefact scatters are situated adjacent to, or in close proximity to, creek flats or valley bottom contexts, frequently on low gradient basal slopes adjacent to streams or wetlands;
- Artefacts may occur wherever surface exposures of exploitable rock occur, rock sources that are known to have been locally exploited include chalcedony, chert, quartz, and fine-grained igneous rocks such as fine-grained porphyry and fine-grained intrusives within granodiorite; and
- Subsurface archaeological deposits are likely to occur where subsurface deposits have been preserved within the landscape, i.e. those areas where erosional factors have not substantially particularly in well drained sedimentary aggrading landforms adjacent to streamlines.



5.4 Limits on use of existing information

The data used to generate the general interpretation of Aboriginal prehistoric land use in the study area has been drawn from previous archaeological work carried out on areas being developed, from a number of broad scale research projects, and on the data gathered during the current cultural heritage assessment. These sources of data can be biased in their sampling of the landscape and are limited in their scope. Consequently, the data currently available are unlikely to have provided a completely accurate and comprehensive representation of the distribution of archaeological sites across the landscape, or of the relative frequency of different site types.

Archaeological assessments commissioned for development projects are restricted to the specific footprint that will be impacted by the project. The area of land being assessed is specifically constrained, and in many cases, will not representatively sample the different landforms found across the wider region being studied.

These limitations will usually become less pronounced as more and more assessments are carried out in a region, since more and more patches of ground are being assessed. A systematic bias in the data can still easily occur, however, if the patches of ground are concentrated in one landform type over another. This could be the case if the assessments relate to development projects which preferentially occur on specific landforms – roads tend not to traverse steep slopes, wind-farms tend not to be built in valleys, and housing developments are preferentially situated on flat land, for example.

Data on uses of the land by Aboriginal groups in the post-contact period, including the present day, might be limited if activities practiced by Aboriginal groups have not been reported in the public domain, and have not been reported to NOHC during consultations with Aboriginal groups. This could occur if land use practices are associated with knowledge that is culturally restricted.

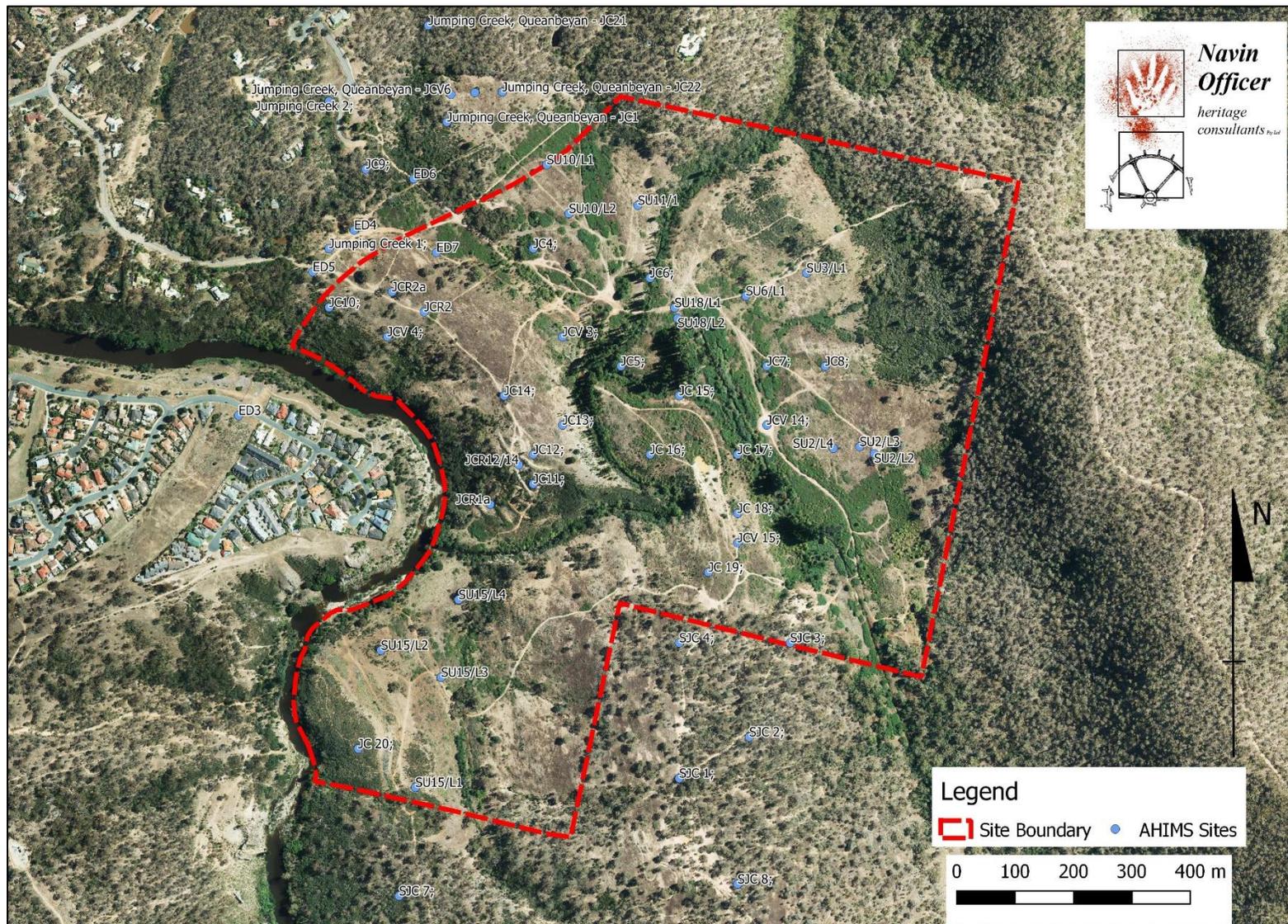
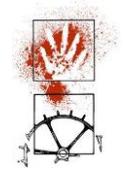


Figure 5.3 AHIMS Sites in relation to Jumping Creek



6. HISTORICAL CONTEXT

6.1 Historical Overview

6.1.1 Jumping Creek Valley

Europeans have utilised the area for over 150 years. Captain A. T. Faunce formed a company to develop the suspected copper, silver and lead deposits in the area. A permit was granted, and the mine commenced operations in May 1851. The mine has subsequently been referred to as the Primrose Valley Mine. However, it did not yield a profitable lode and mining ceased several years later (Kuskie 1989:70, McGowan 1996:170-172).

Lea-Scarlett (1968:245) notes that in 1868 a group of Cornish miners were brought to work a mine in the valley and hopes were held for a rich yield of silver. However, a lack of investment and unpromising results caused the venture to be abandoned, after £300 had been spent.

Other extractive industries formed a significant component of European utilisation practices in the area. Sizeable bands and outcrops are present, and they were exploited through extraction and processing. The remains of brick kilns and limestone quarries are visible evidence of this industry in the valley.

Although there is uncertainty about the date of this activity in Jumping Creek valley, John Gibbs is recorded in church registers as being a Limeburner in the Primrose Valley as early as 1862. However, the name 'Primrose Valley' was applied to two localities in the district – the Jumping Creek Valley and another valley to the east, near Carwoola.

In 1989, a local historian (Bert Sheedy) claimed the remains of a brick limekiln to the east of Jumping Creek probably was built in 1927, when the property belonged to Samuel Shannon. Sheedy stated that an Italian migrant, Giovanni Marchiori, built the kiln, but that was not confirmed by Mrs A. C. Amey, one of Shannon's daughters, who was unable to recall if the kiln was built during her childhood. Limestone was quarried near the kiln, and wood to fuel the burning process was obtained from the property and surrounding area. It is uncertain if the limestone extracted from an outcrop near the confluence of the creek was used for the same purpose (Kuskie 1989:71).

Lime produced by the burning of limestone in the brick kiln was mainly sold for mortar to the new Canberra market, experiencing a building industry boom after the decision to locate the Federal Capital there, but some was also sold to the closer Queanbeyan market. The remains of several other kilns exist in the district, one at White Rocks and one near Majura Road. A number of lime burners, such as George Rottenbury, Tom Sayersbury and Moses Morley, are also mentioned in the historical records, so it appears the Jumping Creek Valley kiln was probably only one of a number that supplied lime mortar to the building industries of Canberra and Queanbeyan (Kuskie 1989:71-72).

By the 1940s, a decline in economic viability was probably the major reason for the cessation of lime burning in the area. The availability of raw materials was not a factor because piles of limestone can still be seen adjacent to the remains of the kiln, inside the kiln chambers and stacked against the quarry wall in the valley (Kuskie 1989:72).

Fossicking for gold in Jumping Creek and Queanbeyan River probably also occurred, with little or no returns. Alluvial prospecting was carried out on the Molonglo River in 1889 and fossickers obtained a small amount of gold from the district in 1955 (Kuskie 1989:72).

There is also evidence of pastoralism in the valley. Clearing of the original forest can be attributed to the desire for increased capacity of the land for grazing, in addition to the procurement of timber for lime burning production. Ringbarking was probably the method employed to kill trees, along with clearing the undergrowth and possibly burning. Sheep were the dominant livestock in the region from the 1830s and appear to have been grazed for some period in the Jumping Creek Valley. Pigs were the other introduced species exploited for commercial purposes in the valley, probably in the mid-20th century. Kuskie identified the remains of a sheep dip and a piggyery in his survey of the area in 1989 (Kuskie 1989:73).



The pattern of land usage that has prevailed in recent decades represents a very different style of usage to that of earlier years and could be characterised as one of largely recreational use. Trail-bike riders and four-wheel drive owners often frequent the area for recreational purposes. The valley and surrounding area is also a popular source of firewood for locals in winter (Kuskie 1989:73).

6.2 Previous Cultural Heritage Studies

In 1989, Kuskie identified a possible limestone quarry in the study area. This location of this site is shown as H8 (using Kuskie's numbering) in Figure 3 above. Kuskie noted there were cement pipe remains, limestone blocks and bricks located in an eroded gully at that location. He stated that, judging by the shape of the gully and the presence of a small spoil heap adjacent to it, soil might have been deliberately quarried from the gully (Kuskie 1989:4, 65).

A total of 13 potential heritage items were recorded within the Jumping Creek study area by NSW Archaeology in 2009. These items are as follows (see Appendix 2 for a full description), see Figure 6.1 for the location of each site:

JCH1 – Shearing shed complex (H3)

JCH2 – Mine shaft (H1)

JCH3 – Limestone quarry (H2)

JCH4 – Brick limekilns (H4)

JCH5 – Limestone quarries (H7)

JCH6 – Limekiln

JCH7 – Mine workings (H6)

JCH8 – Ore processing area (H5)

JCH9 – Miners' camp

JCH10 – Mine shafts

JCH11 – Domestic site

JCH12 – Building material dump (H9?)

JCH13 – Mine diggings

6.3 Heritage Listed Items

One heritage listed item is located in the project area. Marchiori's Lime Kiln and quarry is listed on the Queanbeyan LEP and on the NSW State Heritage Inventory as an item of local significance, See Appendix 3 for the full listing. This site is equal to JCH3 and JCH4 above.

Greenleigh	Marchiori's Lime Kiln and quarry	South east corner of Jumping Creek	Part of Lot 1, DP 711905	Local	A2
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Physical description: A brick and stone kiln built into the side of the creek embankment. The front of the kiln has two semicircular openings at ground level. The chamber behind is approx. 2.4m deep and about 3 m wide to a height of about 2 m. The front wall is about 600 mm thick. The kiln is heavily overgrown with blackberry. A contemporary photograph shows a low structure or wall above and behind the



kiln. The remains of pathway lead back up to the quarry approx. 100 metres to the south. The quarry is about 60 m long, 15 m wide and about 10 m deep (guestimates only). Off to the side is a large mound of spoil.

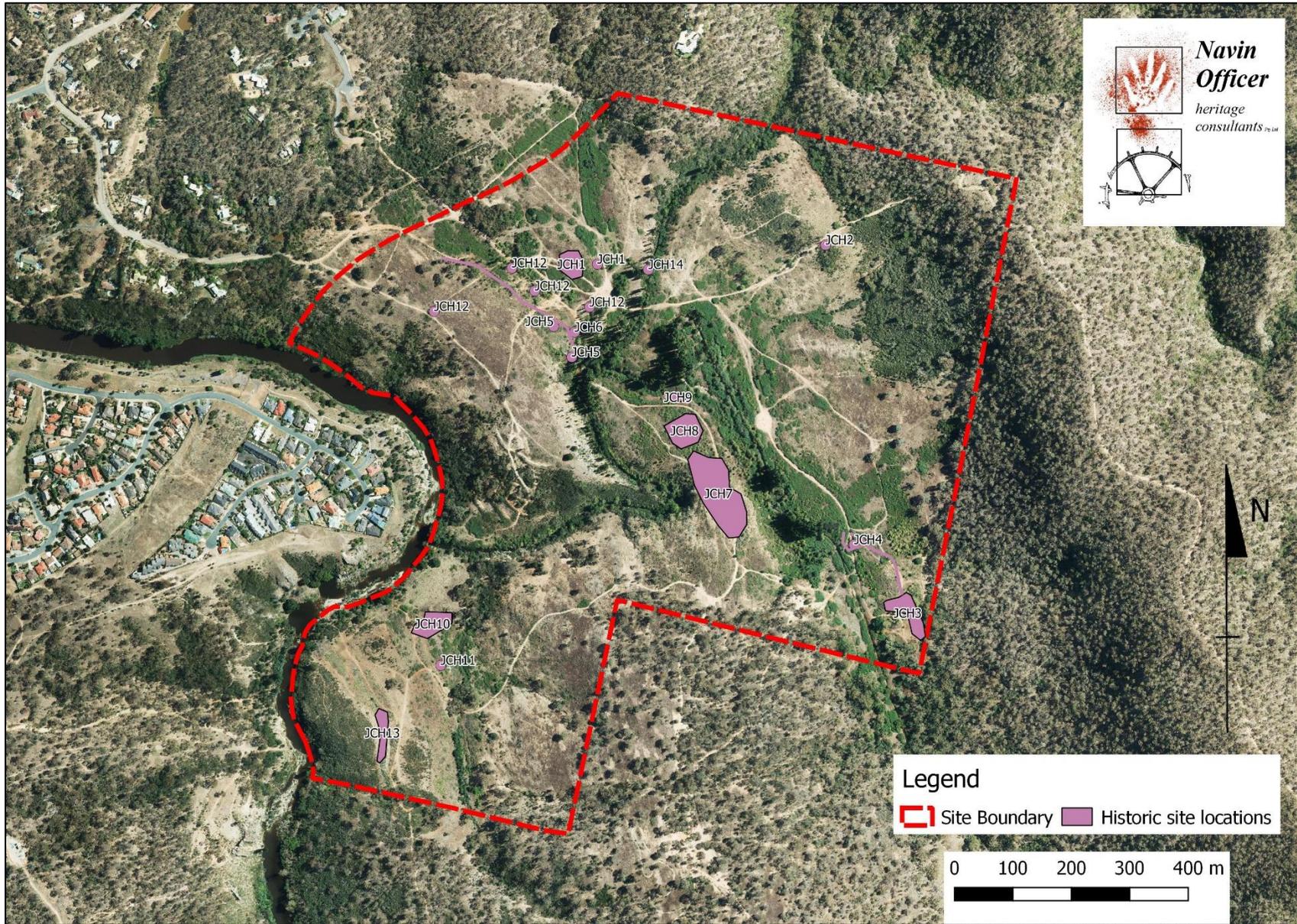


Figure 6.1 Historical Sites in relation to Jumping Creek



7. RESULTS

7.1 Summary

The field survey relocated the sites previously recorded within the study area and identified the following new features:

- Six new Aboriginal site locations including five artefact location and one scarred tree were recorded during the field visit undertaken in September and October 2018.
- During the field assessment additional locations for building material dumps were located, these have been included and mapped as part of previously recorded site JCH12.
- An additional site location was recorded, JCH13.

See Figure 7.8 for the location of all Aboriginal Sites and Figure 7.9 for the location of all Historical sites.

7.2 Aboriginal Sites

Six new Aboriginal site locations including five artefact location and one scarred tree were recorded during the field visit undertaken in September and October 2018.

JC Scarred Tree 1

GDA: 704650.6083040

This site is a scarred tree located on a spur crest above the Queanbeyan River (Figure 7.1).

Tree:

The tree is a white barked eucalypt. Overall it is in moderate to poor condition with extensive limb loss, some of the tree has been harvested, the tree is hollow and there is some regrowth. Its age is hard to ascertain but likely more than 150 years old.

Scar:

Inner width: 47 cm

Outer width: 100 cm

Inner height: 127 cm

Outer height: 163 cm

Scar depth: 23 cm

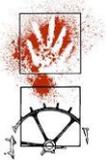
The scar extends to the ground but there is some evidence on the scar face that the original scar may have ended above the ground.

There are metal axe marks in the scar.

Archaeological Interpretation:

Our interpretation is based on the following observations

- The tree is endemic to area
- The tree age estimated at least 150 years
- The estimated regrowth is at least 100 years old



- The scar does extend to ground
- The scar sides are parallel if extend to ground
- The scar edges are uneven

It is assessed that the scar may have a deliberate human origin and it is possible that the scar has an Aboriginal origin.



Figure 7.1 JC Scarred Tree 1

JC 18-1

GDA: 704599.6082898

This site is a scatter of at least 4 artefacts located on a track on the basal slopes above the Queanbeyan river (Figure 7.2). The slope is moderately steep and consists of a sandy deposit. Visibility on the track was 90% and off the track visibility reduced to <5%. Artefacts were located over an area of 6 x 1 metre.

There is moderate to high potential for there to be additional artefacts and moderate potential for there to be subsurface archaeological deposits.

Artefacts:

1. Grey banded chert flake 21 x 15 x 5 mm
2. Grey chert broken flake, proximal portion 10 x 22 x 4 mm
3. Brown silcrete flake 54 x 28 x 7 mm
4. Grey quartzite flaked piece 32 x 20 x 10 mm



Figure 7.2 JC 18-1 looking west

JC 18-2

GDA: 704599.6083317

This site is a scatter of at least 3 artefacts located on a foot track mid-slope above a drainage line (Figure 7.3). The slope is moderately steep, and a sandy deposit was noted on the lower slopes. Visibility on the track was 80% and off the track visibility reduced to <5%. Artefacts were located over an area of 28 x 5 metres.

There is moderate to high potential for there to be additional artefacts and moderate potential for there to be subsurface archaeological deposits.

Artefacts:

1. Broken pebble hammerstone/grindstone 85 x 41 x 41
2. Grey/white quartz broken flake 22 x 17 x 6 mm
3. White quartz broken flaked piece 23 x 16 x 14 mm

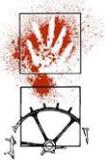


Figure 7.3 JC 18-2 looking north-east

JC 18-3

GDA: 705036.6083225

This site is a scatter of at least 4 artefacts located on basal slopes above Jumping Creek (Figure 7.4). The site was located on a vehicle track.

There is moderate to high potential for there to be additional artefacts and moderate potential for there to be subsurface archaeological deposits.

Artefacts:

1. Grey/brown silcrete flake 20 x 24 x 6 mm
2. Grey silcrete/ FGS flake 17 x 23 x 4 mm
3. Grey quartzite flake 18 x 30 x 7 mm
4. Grey silcrete flake 14 x 25 x 6 mm

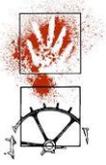


Figure 7.4 JC 18-3 looking north-west

JC 18-4

GDA: 705136.6083158

This site is a scatter of at least 2 artefacts located on a rocky spur crest in a vehicle track (Figure 7.5). Visibility was 60%. Artefacts were located over an area of 5 x 5 metres.

There is moderate potential for there to be additional artefacts and low to moderate potential for there to be subsurface archaeological deposits.

Artefacts:

1. White quartz flake 20 x 26 x 9 mm
2. Grey FGS flake 25 x 20 x 6 mm

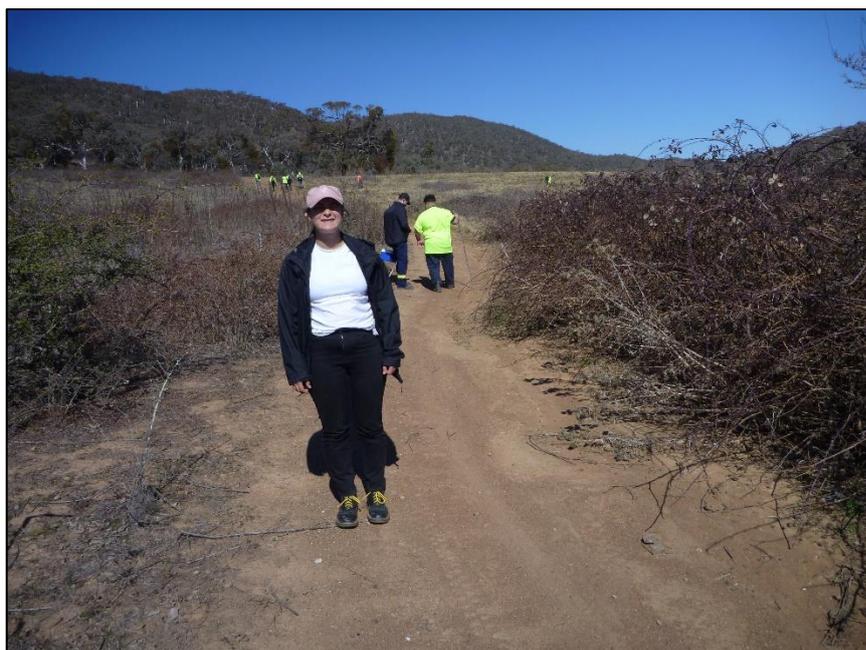
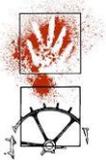


Figure 7.5 JC 18-4 looking east



JC 18-5

GDA: 705171.6083125

This site is a single artefact location in a saddle on a vehicle track (Figure 7.6). Visibility was 60%. Artefacts were located over an area of 5 x 5 metres.

There is moderate potential for there to be additional artefacts and low to moderate potential for there to be subsurface archaeological deposits.

Artefact:

1. Grey FGS flake, some cortex noted 38 x 29 x 17 mm



Figure 7.6 JC 18-5 looking south

7.3 Historical Sites

During the field assessment additional locations for building material dumps were located, these have been included and mapped as part of previously recorded site JCH12.

An additional site location was recorded, JCH14.

JCH14

GDA: 604863.6083343

This site is a metal pipe that extends into the ground located in a drainage line (Figure 7.7). A square metal lid (?) item is located adjacent to the pipe. It is unclear what this site is or what it is associated with.

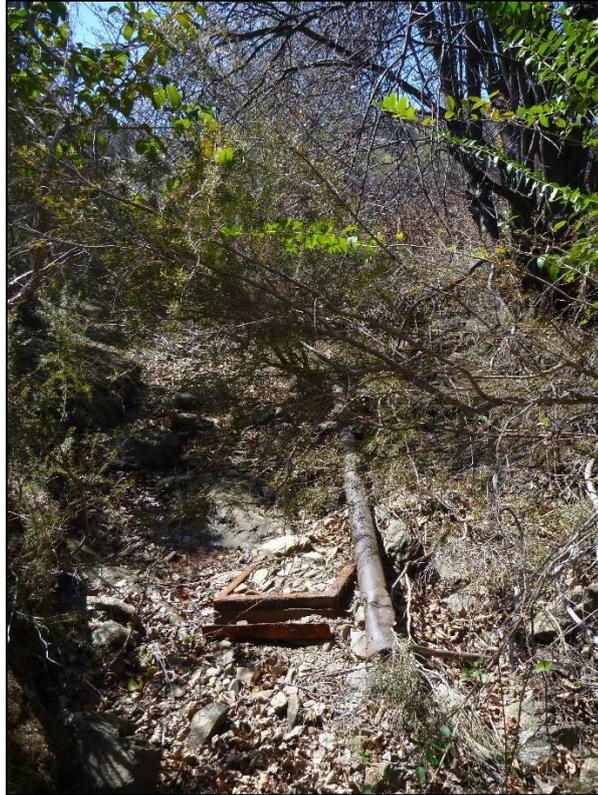
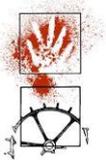


Figure 7.7 JCH14

7.4 Survey Coverage and Visibility Variables

The effectiveness of archaeological field survey is to a large degree related to the obtrusiveness of the sites being looked for and the incidence and quality of ground surface visibility. Visibility variables were estimated for all areas of comprehensive survey within the study area. These estimates provide a measure with which to gauge the effectiveness of the survey and level of sampling conducted. They can also be used to gauge the number and type of sites that may not have been detected by the survey.

Ground surface visibility is a measure of the bare ground visible to the archaeologist during the survey. There are two main variables used to assess ground surface visibility, the frequency of exposure encountered by the surveyor and the quality of visibility within those exposures. The predominant factors affecting the quality of ground surface visibility within an exposure are the extent of vegetation and ground litter, the depth and origin of exposure, the extent of recent sedimentary deposition, and the level of visual interference from surface gravels. Two variables of ground surface visibility were estimated during the survey:

- A percentage estimate of the total area of ground inspected which contained useable exposures of bare ground; and
- A percentage estimate of the average levels of ground surface visibility within those exposures. This is a net estimate and accounts for all impacting visual and physical variables including the archaeological potential of the sediment or rock exposed.

The obtrusiveness of different site types is also an important factor in assessing the impact of visibility levels. For example, artefacts made from locally occurring rock such as quartz may be more difficult to detect under usual field survey conditions than rock types that are foreign to the area. The impact of natural gravels on artefact detection was taken into account in the visibility variables estimates outlined above.

The natural incidence of sandstone platforms suitable for grinding grooves or engraving, together with the incidence of old growth trees, are important considerations in identifying both survey effectiveness and site location patterns outside of environmentally determined factors.



Figure 7.10 depicts the survey transects completed and the landforms within the project area.

Table 7.2 summarises estimates for the degree to which separate landforms within the study area were examined and also indicates the exposure incidence and average ground visibility present in each case. Taking into account survey coverage, archaeologically useable exposures, and visibility variables, the effective survey coverage (ESC) was 20.5% of the total survey area. The ESC attempts to provide an estimate of the proportion of the total study area that provided a net 100% level of ground surface visibility to archaeological surveyors.



Table 7.2 Survey Coverage Data

Survey Unit	Landform	Survey unit area (sq. m)	Visibility %	Exposure %	Effective coverage area (sq. m) survey unit area x visibility % x exposure %	Effective Coverage % (effective coverage area / survey unit area x 100)
1	Spur line crest	59 327	80	35	23730.8	40
2	Spur line crest	31 458	80	40	10066.56	32
3	Saddle	37 231	80	30	8935.44	24
4	Spur line crest	15 668	60	15	3760.32	24
5	Saddle/drainage line	10 727	60	5	321.81	3
6	Crest	31 219	80	20	4995.04	16
7	Saddle/drainage line	13 859	60	5	415.77	3
8	Flats	8 739	80	70	4893.84	56
9	Spur line crest	16 522	60	20	5947.92	36
10	Spur line crest	15 883	50	30	5559.05	35
11	Saddle	7 386	60	60	2658.96	36
12	Saddle/drainage line	13 379	50	20	1337.9	10
13	Spur line crest	14 531	50	20	4359.3	30
14	Spur line crest	46 096	60	50	13828.8	30
15	Hill slopes	54 560	70	30	11457.6	21
16	Hill slopes	35 713	70	30	7499.73	21
17	Saddle/drainage line	7 980	60	20	957.6	12
18	Jumping Creek	166 541	60	10	9992.46	6
		586,819			120718.9	20.57174



Table 7.3 Landform Summary – Sampled areas

Landform	Landform area (sq. m)	Area effectively surveyed (sq. m) (effective coverage area)	% Landform effectively surveyed (area effectively surveyed / landform area x 100)	Number of sites
Spur line crest	199485	66277.87	33	24
Saddle	44617	14054.36	31	6
Saddle/drainage line	45945	3302.297	7	1
Flats	8739	4893.84	56	8
Hill slopes	90273	18957.33	21	6
Jumping Creek	166541	9992.46	6	9

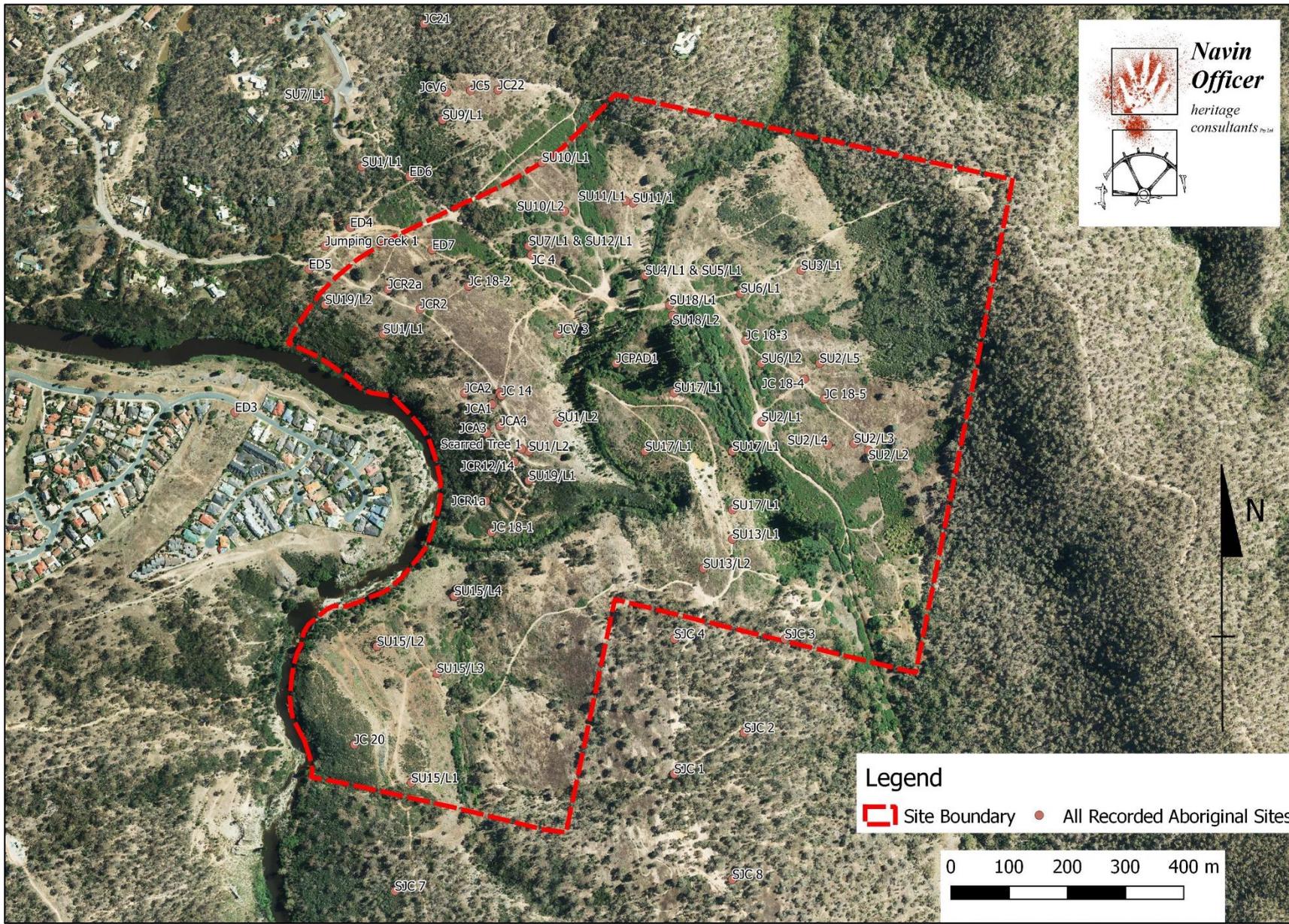


Figure 7.8 All Recorded Aboriginal Site locations in relation to Jumping Creek

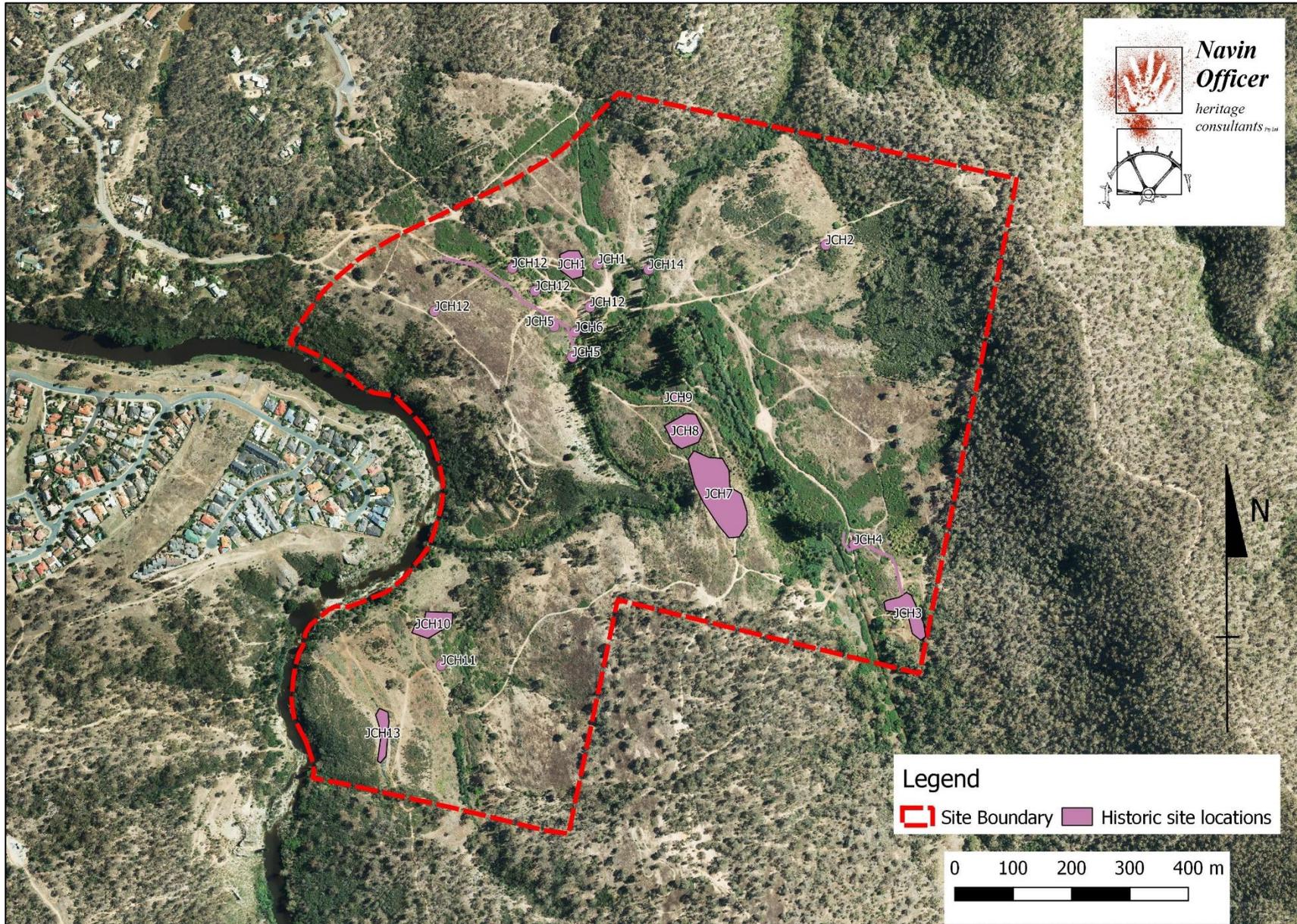


Figure 7.9 All Historical heritage sites in relation to Jumping Creek

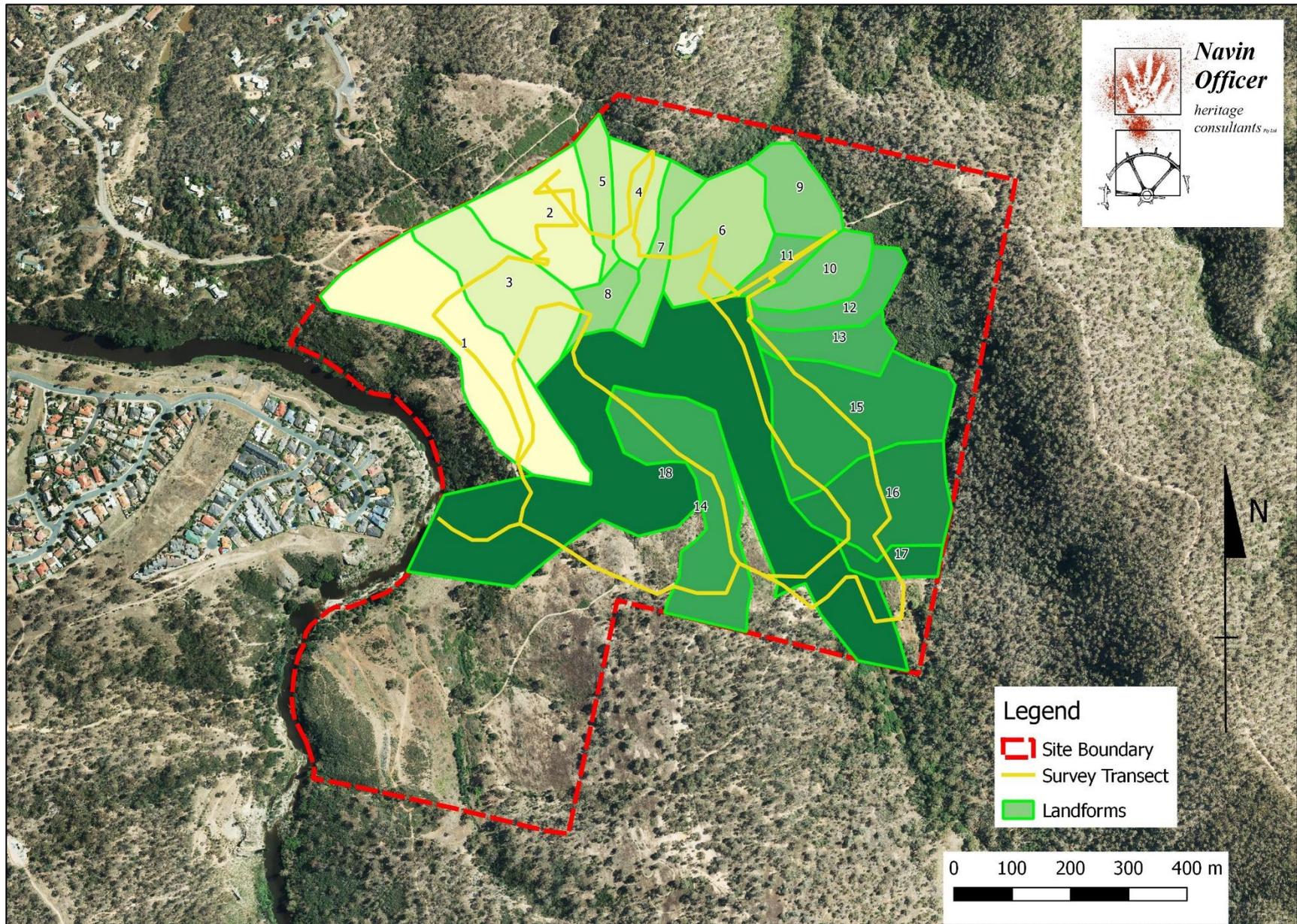


Figure 7.10 Landforms within Jumping Creek and Survey Transects Completed



8. DISCUSSION

Rather than seeing the archaeological resource within the Jumping Creek project area as individual sites, the area is best described as a site complex. The project area location conforms with regional site location models including that the site is:

- located on relatively level ground in locally well-drained contexts, either spur line crests, terraces or elevated creek banks in valley floor contexts, low gradient crests and streamline banks in mid valley slope contexts, and level crests, shoulders and saddles on major ridgelines and spurs; and
- situated adjacent to, or in close proximity to, streams or wetlands.

It is likely that in the past Jumping Creek would have looked more like a wetland than it does today and therefore would have had a large range of the resources most favoured by Indigenous peoples. This and its proximity to the Queanbeyan River, a permanent source of water and another large resource zone, places Jumping Creek within an important camping, hunting and gathering location.

The distribution of artefacts across the landscape is uneven and the result of varying factors including:

- The past indigenous use of the site and the location of resources compared to the location of good camping ground;
- Soil preservation effects including vary degrees of erosion and historical impacts such as mining and clearing; and
- Landscape preservation across the site similar to the above, but also including underlying bedrock and site formation processes.

Overall Jumping Creek is located within an important resource zone within the Queanbeyan region and contains evidence of the use of this resource zone.



9. CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

9.1 Aboriginal Heritage

9.1.1 Assessment Criteria

The Burra Charter of Australia defines cultural significance as 'aesthetic, historical, scientific or social value for past, present and future generations' (Australia ICOMOS 2013). The assessment of the cultural significance of a place is based on this definition but often varies in the precise criteria used according to the analytical discipline and the nature of the site, object or place. Further guidance on the assessment of significance is provided in the Burra Charter practice notes (Australia ICOMOS Nov 2013)

In general, Aboriginal archaeological sites are assessed using five potential categories of significance:

- significance to contemporary aboriginal people;
- scientific or archaeological significance;
- aesthetic value;
- representativeness; and
- value as an educational and/or recreational resource.

Many sites will be significant according to several categories and the exact criteria used will vary according to the nature and purpose of the evaluation. Cultural significance is a relative value based on variable references within social and scientific practice. The cultural significance of a place is therefore not a fixed assessment and may vary with changes in knowledge and social perceptions.

Cultural significance can be defined as the cultural values of a place held by and manifest within the local and wider contemporary Aboriginal community. Places of significance may be landscape features as well as archaeologically definable traces of past human activity. The significance of a place can be the result of several factors including: continuity of tradition, occupation or action; historical association; custodianship or concern for the protection and maintenance of places; and the value of sites as tangible and meaningful links with the lifestyle and values of community ancestors. Aboriginal cultural significance may or may not parallel the archaeological significance of a site.

Scientific significance can be defined as the present and future research potential of the artefactual material occurring within a place or site. This is also known as archaeological significance.

There are two major criteria used in assessing scientific significance:

1. The potential of a place to provide information which is of value in scientific analysis and the resolution of potential research questions. Sites may fall into this category because they: contain undisturbed artefactual material, occur within a context which enables the testing of certain propositions, are very old or contain significant time depth, contain large artefactual assemblages or material diversity, have unusual characteristics, are of good preservation, or are a constituent of a larger significant structure such as a site complex.
2. The representativeness of a place. Representativeness is a measure of the degree to which a place is characteristic of other places of its type, content, context or location. Under this criterion a place may be significant because it is very rare or because it provides a characteristic example or reference.

The value of an Aboriginal place as an educational resource is dependent on: the potential for interpretation to a general visitor audience, compatible Aboriginal values, a resistant site fabric, and feasible site access and management resources.



The principal aim of cultural resource management is the conservation of a representative sample of site types and variation from differing social and environmental contexts. Sites with inherently unique features, or which are poorly represented elsewhere in similar environment types, are considered to have relatively high cultural significance.

The cultural significance of a place can be usefully classified according to a comparative scale which combines a relative value with a geographic context. In this way a site can be of low, moderate or high significance within a local, regional or national context. This system provides a means of comparison, between and across places. However, it does not necessarily imply that a place with a limited sphere of significance is of lesser value than one of greater reference.

The following assessments are made with full reference to the scientific, aesthetic, representative and educational criteria outlined above. Reference to Aboriginal cultural values has also been made where these values have been communicated to the consultants. It should be noted that Aboriginal cultural significance can only be determined by the Aboriginal community, and that confirmation of this significance component is dependent on written submissions by the appropriate representative organisations.

9.2 Cultural heritage values identified

9.2.1 Social or cultural value

All archaeological objects and sites have cultural value for present-day Aboriginal people, as they were created by prehistoric, ancestral Aboriginal people and provide tangible evidence of past occupation of the landscape.

Based on feedback received through the process of consultation with local Aboriginal groups, the archaeological sites identified within the study area have cultural significance to present-day Aboriginal groups as manifestations of their ancestors' past occupation of the landscape.

The Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A) has been identified as a site of Medium Significance as a resource area and camping place associated with the pathway identified as Site B: Queanbeyan River Pathway Cultural Site. Site B: Queanbeyan River Pathway Cultural Area has been identified as a site of High Significance as a section of a pathway that travelled along the Queanbeyan River.

It should be noted that some objects and places might have cultural value that was not communicated to NOHC. This could be the case for objects or places that are associated with information that is culturally restricted.

9.2.2 Scientific (archaeological) value

Rather than seeing the archaeological resource within the Jumping Creek project area as individual sites, the area is best described as a site complex. Site preservation varies across the project area and artefacts can be found on all landscape forms within the project area. The complete scientific value of the project area cannot be fully assessed at this time prior to a program of archaeological test excavation. A test excavation program would enable an assessment of any subsurface archaeological deposit within the project area which can provide further information on site preservation and distribution.

9.2.3 Aesthetic value

None of the sites is judged to have substantial aesthetic value, or value as an educational resource.



9.3 Historical Heritage

9.3.1 Assessment Criteria

The NSW Heritage Branch has defined a methodology and set of criteria for the assessment of cultural heritage significance for items and places, where these do not include Aboriginal heritage from the pre-contact period (NSW Heritage Office & DUAP 1996, NSW Heritage Office 2000). The assessments provided in this report follow the Heritage Branch methodology.

The following heritage assessment criteria are those set out for Listing on the State Heritage Register. In many cases items will be significant under only one or two criteria. The State Heritage Register was established under Part 3A of the Heritage Act (as amended in 1999) for listing of items of environmental heritage that are of state heritage significance. Environmental heritage means those places, buildings, works, relics, moveable objects, and precincts, of state or local heritage significance (section 4, Heritage Act 1977).

An item will be considered to be of State (or local) heritage significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria:

- Criterion (a)** an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);
- Criterion (b)** an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);
- Criterion (c)** an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);
- Criterion (d)** an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;
- Criterion (e)** an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);
- Criterion (f)** an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);
- Criterion (g)** an item is important in demonstrating the principal characteristics of a class of NSW's
 - cultural or natural places; or
 - cultural or natural environments.
(or a class of the local area's
 - cultural or natural places; or
 - cultural or natural environments.)

An item is not to be excluded from the Register on the ground that items with similar characteristics have already been listed on the Register. Only particularly complex items or places will be significant under all criteria.

In using these criteria, it is important to assess the values first, then the local or State context in which they may be significant.

Different components of a place may make a different relative contribution to its heritage value. For example, loss of integrity or condition may diminish significance. In some cases, it is constructive to note the relative contribution of an item or its components. Table 8.1 provides a guide to ascribing relative value.



Table 9.1 Guide to ascribing relative heritage value

Grading	Justification	Status
Exceptional	Rare or outstanding item of local or State significance. High degree of intactness Item can be interpreted relatively easily.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

9.3.2 The Study Area

Marchiori's lime kiln and quarry

Marchiori's lime kiln and quarry (JCH3 and JCH4) are assessed as significant for their important association with the construction of both Queanbeyan and the nation's capital in the late 1920s, 1930s and early 1940s. The kiln has technical significance for its ability to demonstrate lime burning techniques in the early to mid-twentieth century. Each of the kilns is considered to be significant and worthy of listing in the local heritage schedule.

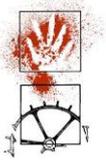
The other items within the project area have been assessed (NSWA 2009), this assessment is outlined in Table 8.2.

Table 8.2 Historical Heritage Significance Assessment

Item	Significance	Criteria
JCH1 Shearing shed complex	Local significance	This item has research potential and significance at a local level against criterion 'e'. It also has potential significance against criterion 'b' due to the possible links with the Willis and Gibbs families.
JCH2 Mine shaft	Does not meet the criteria for heritage listing	This item is not assessed to have significance against any of the criteria



Item	Significance	Criteria
JCH5 Limestone quarries	Local significance	This item has significance at a local level against criterion 'b' due to its apparent association with the Gibbs family. It may also have significance against criterion 'e' as a component of the larger complex including JCH6. Because of this association with early lime burning and the relative rarity of such sites this item also has local significance against criterion 'f'.
JCH6 Limekiln	Local significance	This item has research potential and significance at a local level against criterion 'e'. It also has significance against criterion 'b' due to its association with the Gibbs family. There is also significance against criterion 'f' due to the relative rarity of limekiln sites in the local area, particularly sites dating to the 19 th century.
JCH7 Mine workings	Local significance	This item has significance at a local level against criterion 'a' due to its association with the early mining ventures in the region. It may also have significance against criterion 'e' as a component of a larger complex including JCH8 and JCH9.
JCH8 Ore processing area	Local significance	This item has research potential and significance at a local level against criterion 'e'. It also has significance against criterion 'a' due to its role in the early 20 th century mining activities.
JCH9 Miners' camp	Local significance	This item has research potential and significance at a local level against criterion 'e'. It also has significance against criterion 'a' due to its role in the early 20 th century mining activities.
JCH10 Mine shafts	Does not meet the criteria for heritage listing	This item is not assessed to have significance against any of the criteria
JCH11 Domestic site	Local significance	This item has research potential and significance at a local level against criterion 'e'. It also has potential significance against criterion 'a' due to its possible association with 19 th /20 th century mining activities.
JCH12 Building material dump	Does not meet the criteria for heritage listing	This item is not assessed to have significance against any of the criteria
JCH13 Mine diggings	Does not meet the criteria for heritage listing	This item is not assessed to have significance against any of the criteria
JCH14 Metal pipe	Does not meet the criteria for heritage listing	This item is not assessed to have significance against any of the criteria



10. THE PROPOSED ACTIVITY

10.1 Historical Overview

The Jumping Creek property is currently unoccupied and has not been worked or used since the 1960s (Parsons Brinckerhoff Australia Pty Ltd 2008). However, the area shows evidence of having undergone considerable prior impacts and modification during the period of European occupation and usage (cf Boot and Heffernan 1989, Kuskie 1989; Parsons Brinckerhoff Australia Pty Ltd 2008; Saunders 2007). The broad project area is highly eroded as a result of general clearance, farming and mining land use.

The historical context of land use on the property is outlined in detail in Section 6. In summary the property has a long history of rural grazing and extractive land uses (mining, quarrying and mineral processing). Impacts to the property from grazing include vegetation clearance, fencing, and sheep handling areas (such as the sheep dip described later in this report). On crests and slopes topsoil is generally entirely absent with shale bedrock exposed. It is likely that grazing has contributed to this phenomenon.

Mining activities for gold, copper and lead date back to the 1850s and continued into the early 1990s. Impacts to the environment relating to mining have been carried out over relatively extensive areas of the property although they are most obvious now as site specific areas such as shafts or quarries.

The property is now utilised informally for motorbike riding and recreational walking. The site is crisscrossed by numerous braided tracks and trails. It also contains dumped rubbish, cars and other objects.

10.2 Proposed project

Jumping Creek is a new residential development. The proposed residential development, will be in accordance with Queanbeyan Palerang Regional LEP including areas of the site set aside for environmental living, environmental conservation and public recreation uses.

10.3 Potential harm

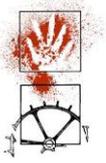
A number of archaeological sites identified have the potential to be harmed by the proposal. The nature of potential impacts to all archaeological sites is detailed in Section 11.

Aboriginal sites identified during this study fall into three categories:

- Sites that would not be directly impacted;
- Sites that are in proximity to areas of proposed work and have the potential to be inadvertently impacted; and
- Sites that would be directly impacted by proposed construction.

Impact to archaeological sites could arise through the following processes:

- Disturbance and damage to archaeological material through vehicle movements. The proposal involves the movement of a variety of vehicles along access tracks, around worksites and on vehicle laydown areas. The movement of vehicles across archaeological sites results in the movement and mixing of artefacts, and damage to artefacts through breakage – severe damage can destroy artefacts, in that it makes them unidentifiable and therefore archaeologically undetectable. This impact can be experienced by artefacts on the surface, and by subsurface artefacts if vehicle movement scuffs up subsurface deposits sufficiently to uncover buried artefacts.
- Disturbance and damage to archaeological material through excavations. Excavations would be carried out during laying house foundations, streets, street lights and other infrastructure,



subsurface services, and in the course of levelling, landscaping and stabilising the ground surface. Excavations result in the movement and mixing of artefacts and archaeological deposits, and damage to artefacts through breakage. The impact of excavation is experienced by artefacts on the ground surface and in subsurface deposits throughout the depth of the excavation.

- Disturbance and damage to archaeological material during revegetation of excavation sites and work sites. Revegetation would, where necessary, involve loosening areas of ground compacted by construction equipment. The loosening of ground could result in the movement and mixing of artefacts and archaeological deposits and could result in damage to the artefacts through coming into contact with the tools being used.
- Erosion of sediments from areas of disturbed ground. The proposal involves activities that would degrade or remove ground-cover vegetation, and that would break up areas of ground and consequently make sediments more friable. These processes make areas of ground more prone to erosion. Vulnerability to erosion is heightened on sloped areas where surface water runoff occurs during rainfall. Erosion impacts archaeological sites by stripping away sediments which hold artefacts, consequently removing the potentially informative context of these artefacts; and by moving the artefacts themselves, which can result in artefacts from separate archaeological contexts being mixed together, and can also result in damage to artefacts as they collide with rocks and other objects (Wildesen 1982). As a process impacting sites, accelerated erosion could occur during the construction phase, and could also occur as an ongoing impact after the construction works have finished. Disturbed ground takes time to recover and re-vegetate, during which time it is prone to erosion.

10.4 Impact on Aboriginal scientific heritage values

The consequences of impact to archaeological sites, in terms of degrading these sites as sources of information about the past, is dependent on both the severity of impact - how badly it disturbs the site, and damages or destroys artefacts - and on the scientific significance of the site in its undisturbed state.

This is a simple consequence of the fact that scientific significance refers to the amount of information a site can potentially yield about human activity in the past. Impact to a site of high significance would have more severe consequences than impact to a low significance site, as degradation of a high significance site represents a greater loss to the archaeological resource of the region.

To assess the scientific or archaeological value of the sites at Jumping Creek further investigation is required. While some of the sites are likely to be characterised by the visible sparse distribution of artefacts across the surface we have identified areas where there is moderate to high potential for subsurface archaeological deposits to occur. To understand the scientific values an archaeological subsurface testing programme is needed. Subsurface deposits have the potential to yield scientific information that has been preserved by the processes that have buried and protected the site through time. To understand the potential impacts on these areas of potential archaeological deposit more detail is required of the nature of the development and its impacts.

10.5 Impact on Aboriginal cultural heritage values

Archaeological sites have cultural heritage value for present-day Aboriginal groups, in that they are manifestations of prehistoric Aboriginal groups and their occupation and use of the land. In that sense, the impacts to archaeological sites discussed above carry with them an impact to the cultural heritage value of the study area.

Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A) as a site of is of Medium Significance as a resource area and camping place. Additionally, Site B: Queanbeyan River Pathway Cultural Area is of high cultural significance. These cultural values should be taken into consideration when assessing the impacts of the proposal. Further consultation is required with RAPs on the form of impact mitigation for these areas.



11. AVOIDING AND MINIMISING HARM

11.1 Impact assessment

All sites within the area currently defined as the “Developable Land” may be directly impacted by the project. As a detailed design has not been finalised the exact impact to each site cannot yet be defined. Additionally, the subsurface archaeological resource of the project area is not yet known, it is therefore recommended that as a first step a program of archaeological test excavation be undertaken.

Following this and following approval of a Development Application and Aboriginal Heritage Impact Permit (AHIP) at a minimum all Aboriginal objects that are to be directly impacted by the project should be the subject of an archaeological collection program.

Ten items of Historical heritage are located within the “Developable Land” and may be subject to impacts from the project. Part of the Heritage Listed site Marchiori’s lime kiln and quarry (JCH3 and JCH4) is within the developable land. Additionally, sites JCH1, JCH5, JCH6 JCH7 and JCH8 are within the “Developable Land” and have been assessed as meeting the criteria for local heritage listing. Sites JCH2, JCH12 and JCH14 are within the “Developable Land” but have been assessed as not meeting the requirements for heritage listing.

11.2 Input by Aboriginal People

This section will be completed following consultation with the RAPs for the project. However, it should be noted that Wally Bell (BNAC) has stated:

....BNACC does have a concern about the impacts of the proposed project on the Aboriginal Cultural significance of this area. BNACC would like to state that the proposed methodology is the normal practice but given the large number of site impacts would like to undertake a consultation process in the overall planning practice to try and preserve some of those sites, i.e. landscape architecture, instead of the usual salvage and destroy

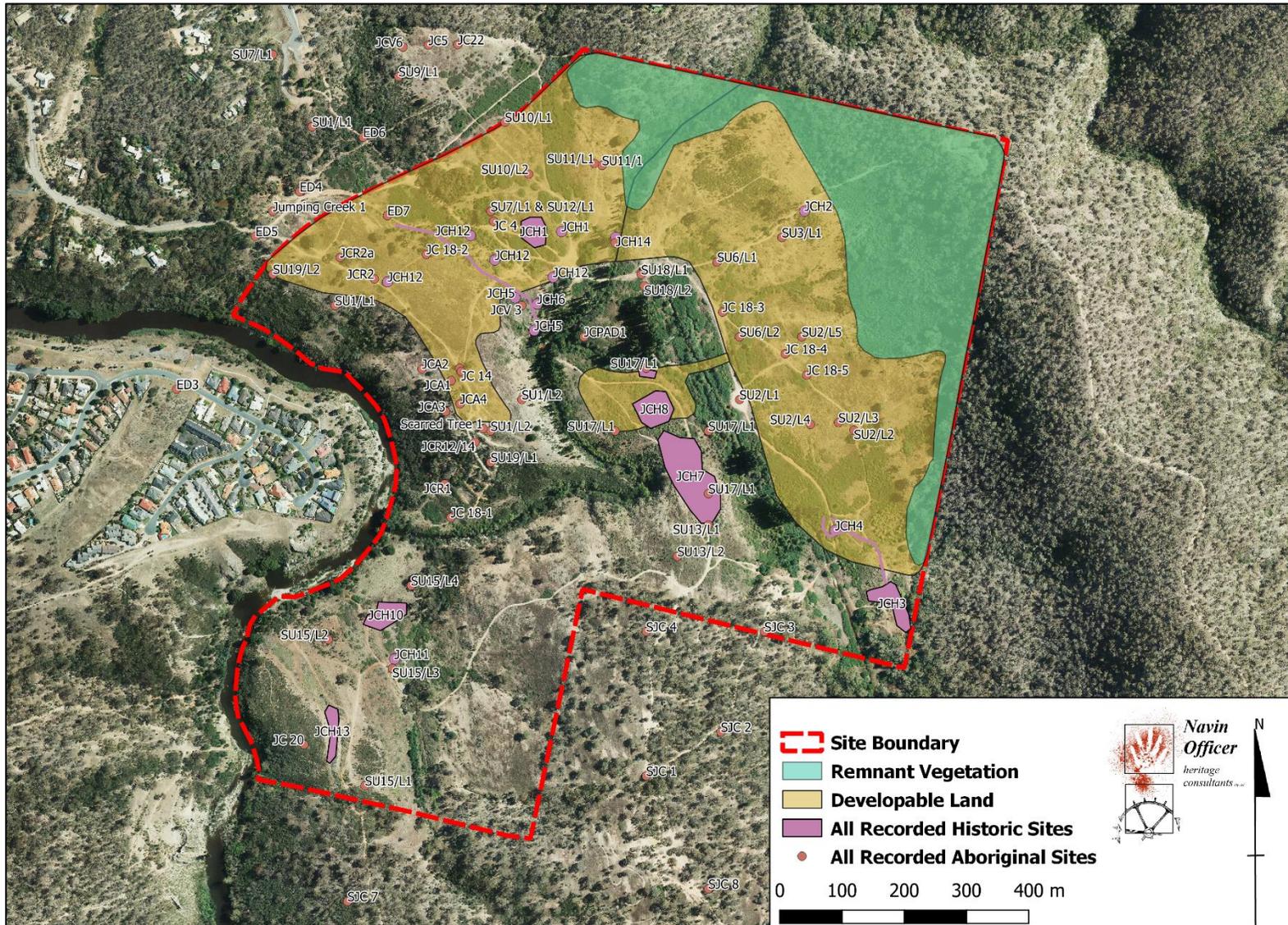
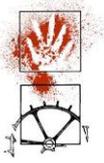


Figure 11.1 All Recorded Sites Compared to the Areas of Identified "Developable Land" (indicative only refer to subdivision plan for detail plan)



12. RECOMMENDATIONS

Where possible, cultural heritage sites should be avoided by the proposed Jumping Creek development. Where this is not feasible the following management and mitigation strategies should be followed.

1. All Aboriginal sites within the study area are of cultural significance to the local Aboriginal community. Also, independent of archaeological sites and objects within the study area, Valley (Jumping) Creek & Queanbeyan River Junction Resource Gathering and Camping Cultural Area (Site A) as a site of is of Medium Significance as a resource area and camping place. Additionally, Site B: Queanbeyan River Pathway Cultural Area is of high cultural significance. These cultural values should be taken into consideration when assessing the impacts of the proposal. Further consultation is required with RAPs on the form of impact mitigation for these areas.
2. A landscape based archaeological subsurface testing program should be undertaken in consultation with the RAPs, and conducted, prior to development impacts. Testing should be include all landforms within the project area that will be directly impacted. The aim: to ascertain the presence and archaeological significance of associated deposits.
 - i. If the archaeological deposits are assessed to be of low scientific significance (at either a local or state level), no further archaeological works will be necessary prior to approval for development-related impacts.
 - ii. If the archaeological deposits are assessed to be of moderate to high significance (at either a local or state level), then a program of archaeological salvage will be required in order to retrieve the requisite amount of information from the site prior to approval for development related impacts.

A methodology is provided in Appendix 6 for this testing program.

3. Surface artefact collection should be conducted at all Aboriginal sites in the Jumping Creek study area prior to development impacts.
4. Site JC Scarred Tree 1 should be avoided by the project.
5. A return to country protocol or long-term management plan should be developed in consultation with the RAPs for any Aboriginal artefacts that are collected/salvaged during mitigation works associated with this project.
6. Archival recording should be conducted of historic sites within the project area assessed as locally significant. Archival recordings should be in form of detailed surveys for those items that will be impacted. In many cases this will necessitate substantial vegetation clearance prior to and during survey work. Depending upon the results of such investigations there may be the need for additional work in the form of salvage excavation at some or all of the heritage items.
7. Consideration should be given to incorporating the appropriate interpretation of the history and heritage of the area into the final project design.
8. The unanticipated discovery protocol outlined in Appendix 7 should be implemented for this project.

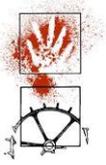


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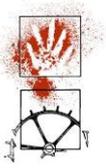
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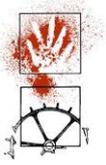
Wright W. D. 1923. Canberra. John Andrew & Co., Sydney

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APPENDIX 1

RECORD OF ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010



Notice in Queanbeyan Age:

ABORIGINAL HERITAGE ASSESSMENT

Navin Officer Heritage Consultants Pty Ltd has been commissioned by PEET Limited C/- SPACELAB Studio Pty Ltd to conduct a cultural heritage assessment of the Jumping Creek Estate project.

The investigation is required to assess the potential impact of the proposed development of these lands on Aboriginal cultural heritage values.

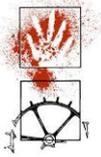
As required by the Office of Environment and Heritage's *Aboriginal cultural heritage consultation requirements for proponents 2010*, we invite Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of objects and places in the investigation area, and who have an interest in this project, to register an interest in a process of community consultation.

The purpose of this consultation is to assist the proponent and government authorities in the preparation and assessment of legislative requirements, permits and approvals.

Please forward expressions of interest to:

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
Kingston ACT 2604

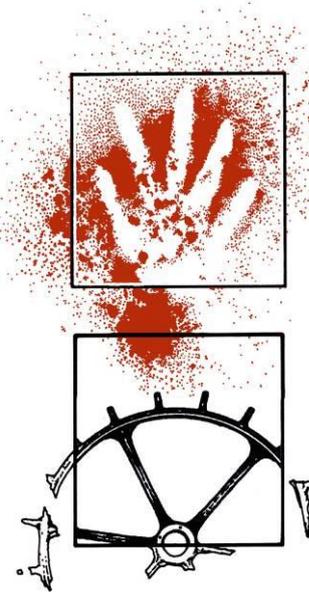
The closing date for this registration of interest is, 31st July 2018



Stage 1 Letter Example:

11 July 2018

The Secretary
Ngambri Local Aboriginal Land Council
PO Box 150
Queanbeyan NSW 2620



**Navin
Officer**

*heritage
consultants
pty ltd*

abn: 28 092 901 605

Dear Sir/Madam,

Re: Implementation of the OEH Aboriginal cultural heritage consultation requirements for proponents 2010 for the Jumping Creek Estate project

Navin Officer Heritage Consultants Pty Ltd has been commissioned by PEET Limited C/- SPACELAB Studio Pty Ltd to conduct a cultural heritage assessment of the Jumping Creek Estate project (please see attached map).

We are required to implement the Office of Environment and Heritage's *Aboriginal cultural heritage consultation requirements for proponents 2010* for this project.

This requires us to ascertain, from reasonable sources, the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects or places relative to Jumping Creek study area.

I am therefore writing to inform you of this development proposal and associated archaeological assessment program and request that you provide us with the names of Aboriginal people who you know that may hold cultural knowledge relevant to determining the significance of Aboriginal objects or places for the Jumping Creek Estate project.

Please respond in writing within 14 days to:

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
KINGSTON ACT 2604

or by fax to; (02) 6282 9416

Yours faithfully,

Nicola Hayes

Nicola Hayes
Principal Archaeologist



Local Land
Services
South East

24th July 2018

Secretary

Navin Officer Heritage Consultants Pty Ltd

4/71 Leichardt Street

Kingston ACT 2604

Re: Jumping Creek Estate Project

Thank you for your letter dated 11th July 2018 requesting assistance with identifying Aboriginal stakeholder groups or persons who may have an interest in your project area.

Catchment Management Authorities are listed in *Section 4.1.2 (g) of the Aboriginal cultural heritage consultation requirements for proponents 2010*, under *Part 6, National Parks and Wildlife Act 1974* as a source of information to obtain the "names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal *objects* and/or *places*". We understand that with the loss of Catchment Management Authorities in NSW such requests are likely to be forwarded to Local Land Services.

South East Local Land Services is a partner with many Aboriginal communities in the region on natural resource management (NRM) projects. We are not, however, the primary source for contacting or managing contact lists for Aboriginal communities or persons that may inform or provide comment on planning issues. Currently we do not coordinate or administer any Aboriginal reference group for our region.

We strongly recommend that you make contact with the Office of Environment and Heritage (OEH), Cultural Heritage Division, Queanbeyan for all-inclusive contact lists of persons and organisations that may assist with your investigation.

Yours sincerely,

Noel Webster

Aboriginal Community Support Officer

South East Local Land Services
PO Box 3095
Wollongong NSW 2500
Tel: 02 42249700 | Fax: 02 42249669 | www.ils.nsw.gov.au



Office of
Environment
& Heritage

Your reference: Jumping Creek Estate Project,
Queanbeyan
Our reference: DOC18/490139
Contact: Kym McNamara 6229 7028

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
KINGSTON ACT 2604
via email: nhayes@nohc.com.au

The Secretary,

**WRITTEN NOTIFICATION OF PROPOSAL AS REQUIRED UNDER DECCW ABORIGINAL
CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010**

RE: Jumping Creek Estate Project, Queanbeyan, NSW

I refer to your emailed letter received by the Office of Environment and Heritage (OEH) on 6 July 2018 regarding the above matter.

Attached is a list of known Aboriginal parties for the Queanbeyan - Palerang local government area that OEH feels is likely to have an interest in the development. Please note this list is not necessarily an exhaustive list of all interested Aboriginal parties and receipt of this list does not remove the requirement of a proponent/ consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (April 2010).

Under Section 4.1.6. of the *Consultation Requirements* you must also provide a copy of the names of each Aboriginal person who registered an interest to the relevant OEH regional office and Local Aboriginal Land Council (LALC) within 28 days from the closing date for registering an interest.

Note: the contact details in the list provided by OEH may be out of date as it relies on Aboriginal parties advising OEH when their details need changing. If individuals/companies undertaking consultation are aware that any groups contact details are out of date, or letters are returned unopened, please contact either the relevant stakeholder group (if you know their more current details) and/or OEH. AHIP applicants should make a note of any group they are unable to contact as part of their consultation record.

If you wish to discuss any of the above matters further please feel free to contact Kym McNamara on 6229 7028.

Yours sincerely

Jackie Taylor
Team Leader, Aboriginal Heritage - South East
Regional Operations Division

PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW
Tel: (02) 6229 7188 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au



Your Ref: Jumping Creek Subdivision
Our Ref: SF140635
C1893461

16 July 2018

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
KINGSTON ACT 2604

Attention: Nicola Hayes

Implementation of the OEH Aboriginal cultural heritage consultation requirements for proponents 2010 for the Jumping Creek Estate project

Council refers to your letter dated 11 July 2018 regarding the above request. You are advised to contact the Ngambri Local Aboriginal Land Council and the United Ngunnawal Elders Council.

Ngambri Local Aboriginal Land Council

CEO – Patricia Williams
PO Box 150, Queanbeyan
ceo@ngambri.com.au
Ph: 6297 4152

United Ngunnawal Elders Council (UNEC)

Secretariat and administrative support for UNEC is provided by the ACT Office for Aboriginal and Torres Strait Islander Affairs. Please contact the secretariat on (02) 6207 9784 or by e-mail at oatsia@act.gov.au for further details.

Correspondence for UNEC should be addressed as follows:

Co-Chairs
United Ngunnawal Elders Council
C/- Office for Aboriginal & Torres Strait Islander Affairs
GPO Box 158
Canberra ACT 2600

Yours sincerely

Arthean McBride
Senior Strategic Planner
Queanbeyan-Palerang Regional Council

OFFICES
144 Wallace St, Braidwood
10 Majara St, Bungendore
256 Crawford St, Queanbeyan

POSTAL
PO Box 348, Bungendore NSW 2621
PO Box 90, Queanbeyan NSW 2620

PHONE/FAX
Bungendore/Braidwood
P: 02 6238 8111
Queanbeyan
P: 02 6285 6000 F: 02 6285 6666

EMAIL/WEB
W: www.qprc.nsw.gov.au
E: council@qprc.nsw.gov.au
ABN 95 933 070 982

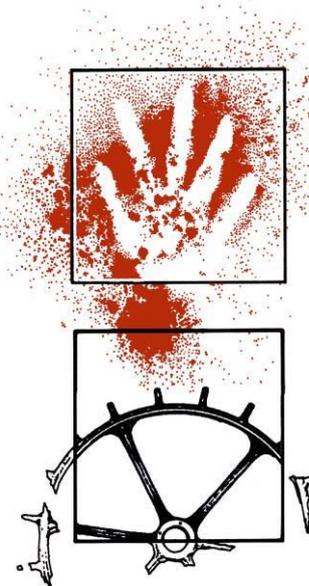


Example letter to OEH groups:

24 July 2018

Ms Trisha Williams
A/g CEO
Ngambri Local Aboriginal Land Council
PO Box 150,
QUEANBEYAN NSW 2620

ceo@ngambri.com.au



**Navin
Officer**

*heritage
consultants
pty ltd*

abn: 28 092 901 605

Dear Trisha,

Re: Implementation of the OEH Aboriginal cultural heritage consultation requirements for proponents 2010 for the Jumping Creek Estate project

Navin Officer Heritage Consultants Pty Ltd has been commissioned by PEET Limited C/- SPACELAB Studio Pty Ltd to conduct a cultural heritage assessment of the Jumping Creek Estate project.

Name and contact details of the proponent:

PEET Limited
C/- SPACELAB Studio Pty Ltd
Mr Geoff Bunnett
Phone: 02 6262 6363
5/97 Northbourne Avenue Turner ACT 2612

The project is known as the Jumping Creek Estate. Jumping Creek Estate is a residential subdivision located north-east of Queanbeyan, NSW (please see attached map). The Jumping Creek Estate project may be the subject of an application for an Aboriginal heritage impact permit, therefore we are implementing the NSW Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents 2010*.

The purpose of the community consultation with relevant Aboriginal people is to assist PEET Limited in the preparation of an application for an Aboriginal heritage impact permit and to assist the Director-General in their consideration and determination of the application.

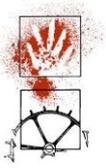
I am therefore writing to inform you of this development proposal and invite registration as an interested group.

Please respond in writing within 14 days to:

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
KINGSTON ACT 2604

or by fax to: (02) 6282 9416

or by email to: navinofficer@nohc.com.au



Please note it is a requirement of the *Aboriginal cultural heritage consultation requirements for proponents 2010* that we provide your name to the NSW Office of Environment and Heritage and to the Local Aboriginal Land council unless you specify otherwise.

Yours faithfully,

Nicola Hayes

Nicola Hayes
Principal Archaeologist



Methodology for Aboriginal Cultural Heritage Assessment

Jumping Creek Estate

Navin Officer Heritage Consultants

August 2018

1. THE PURPOSE OF THIS DOCUMENT

The purpose of this document is to:

- provide to registered Aboriginal parties (RAPs), information about the proposed project;
- provide for review and comment, a proposed methodology for the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Jumping Creek Estate project; and
- provide an opportunity whereby registered Aboriginal parties can contribute culturally appropriate information that will enable the cultural significance of Aboriginal objects and/or places in the proposed project area to be determined.

This document is provided to registered Aboriginal parties (RAPs), for review and comment.

The methodology outlined below has been developed in accordance with the *NSW OEH Code of Practice for Aboriginal cultural heritage consultation requirements for proponents 2010*.

In accordance with the NSW OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* Registered Aboriginal parties are invited to provide comments and suggestions back to Navin Officer Heritage Consultants (NOHC) by **5th September 2018**.

NOHC contact information is as follows:

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
Kingston ACT 2604

email: navinofficer@nohc.com.au

phone: 02 62829415

fax: 02 62829416

Proponent contact:

PEET Limited
C/- SPACELAB Studio Pty Ltd
Mr. Geoff Bunnett
Phone: 02 6262 6363
5/97 Northbourne Avenue Turner ACT 2612



2. The Study Area

Jumping Creek Estate is a proposed residential subdivision located north-east of Queanbeyan, NSW (Fig. 1), approximately 3km south-east of the Queanbeyan CBD, and bounded by the Queanbeyan River on the southern side of the site. The Jumping Creek Estate Area consists of approximately 96.43 hectares of land. The area sits within an enclosed valley, with the creek flowing in a north westerly direction through basal slopes, some alluvial flats are also present in the landscape.

3. Project Description

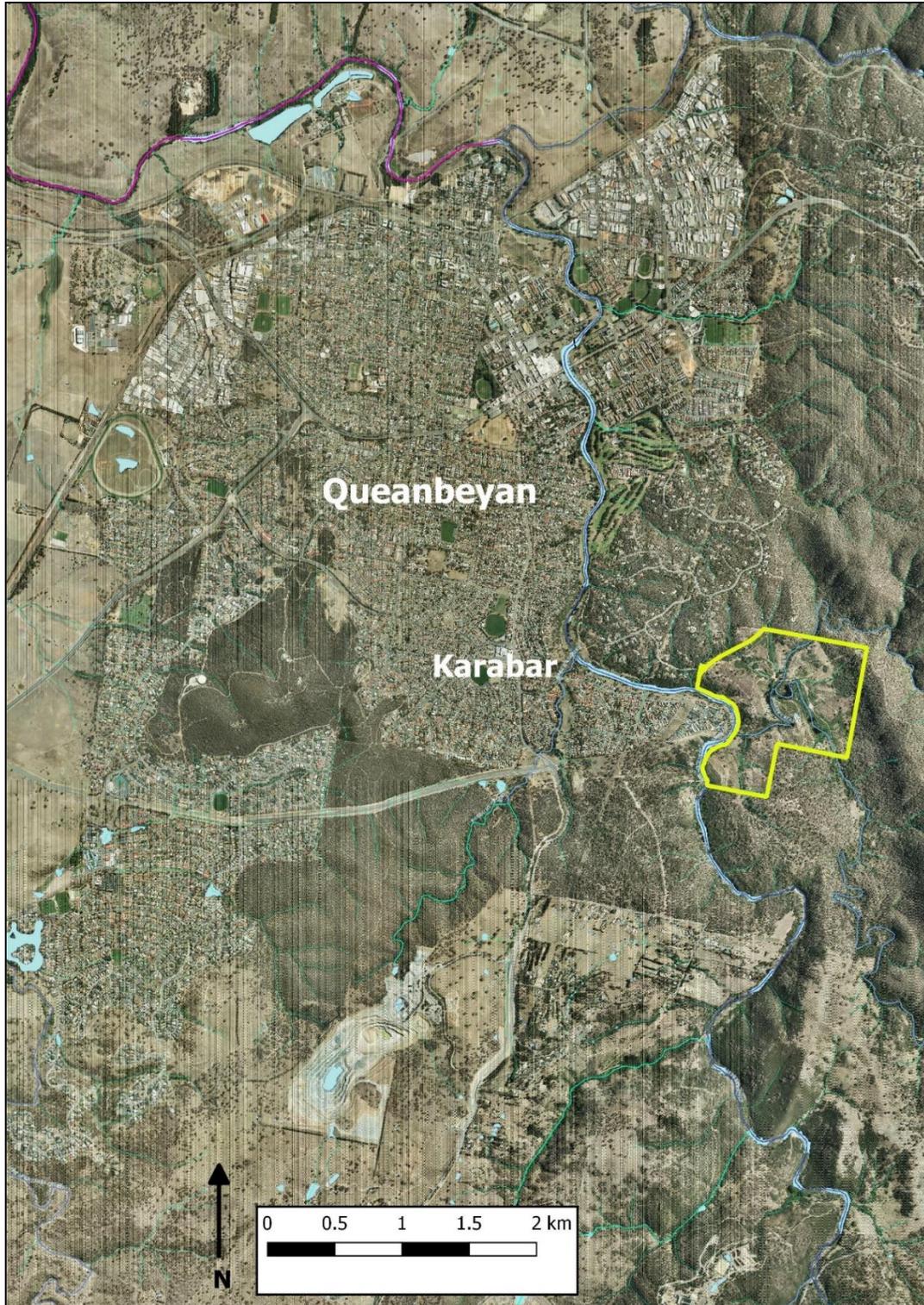
Jumping Creek is a new residential development on the eastern side of the new Ellerton Drive Extension in Queanbeyan. The proposed residential development, will be in accordance with Queanbeyan Palerang Regional Council's Planning Proposal for the site. The subject area has been divided between three proposed zones, environmental conservation, environmental living, and public recreation. The current DP number is 1199045. Access to Jumping Creek will be from two proposed new access points off the Ellerton Drive extension.

The site has a number of existing features including:

- . Sloping lands heavily degraded by previous farming/industry uses;
- . Former infrastructure associated with previous industry uses (mine sites);
- . Remnant woodland vegetation communities to the boundaries of the site; and
- . A currently weed infested and eroded creek (Jumping Creek) traversing the site and connecting into Queanbeyan River.

Forty Aboriginal heritage recordings may be impacted by the development:

SU1/L1	SU3/L1	SU9/L1	SU15/L1	SU18/L2	JCR2
SU1/L2	SU4/L1	SU10/L1	SU15/L2	SU19/L1	JCR12/14
SU2/L1	SU5/L1	SU10/L2	SU15/L3	SU19/L2	JCR1
SU2/L2	SU6/L1	SU11/L1	SU15/L4	JC5	SJC3
SU2/L3	SU6/L2	SU12/L1	SU16	JC20	ED7
SU2/L4	SU7/L1	SU13/L1	SU17/L1	JCV3	
SU2/L5	SU8	SU14	SU18/L1	JCR2a	



**Figure 1 Location of Jumping Creek Project Area
(Aerial Image)**

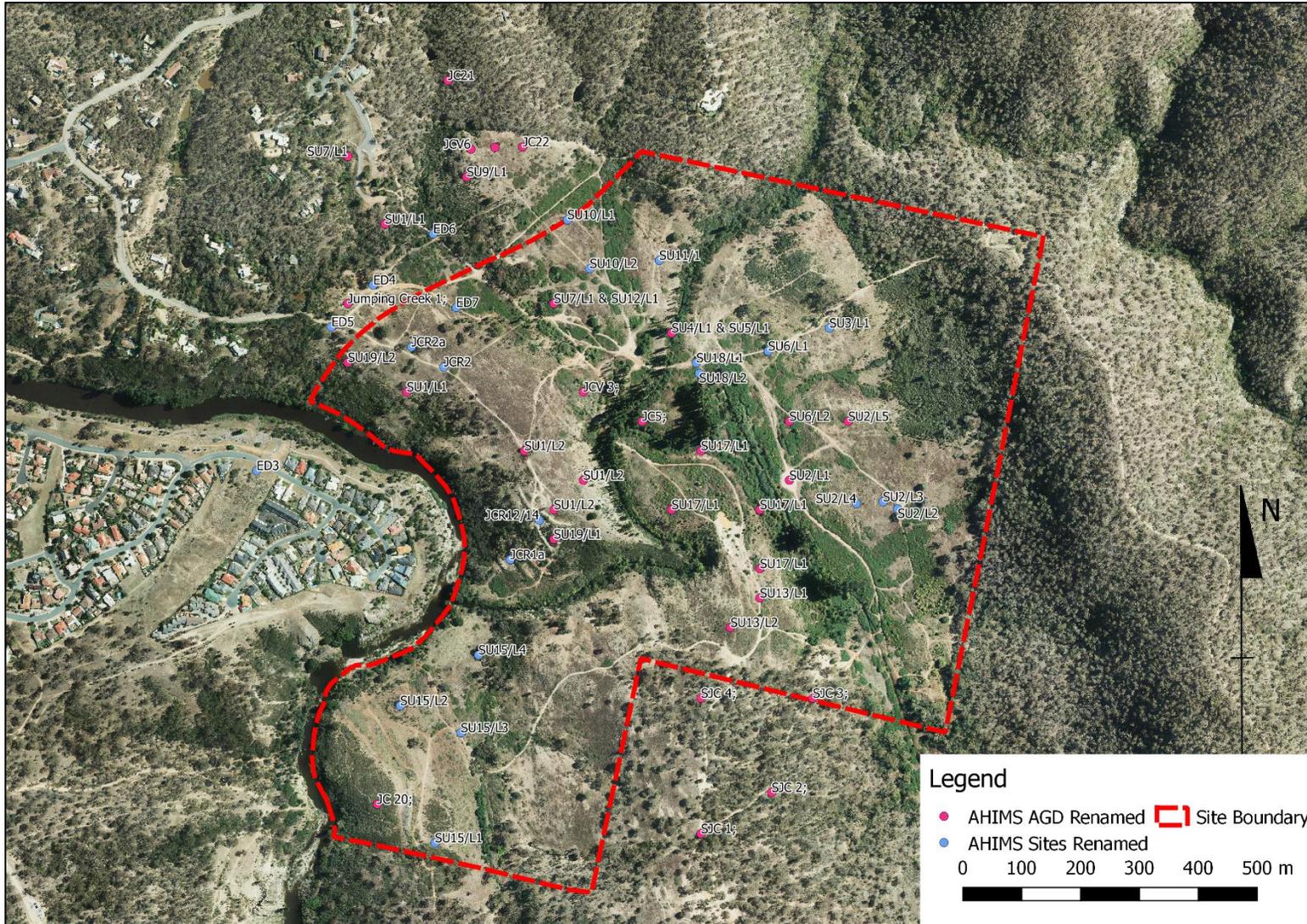
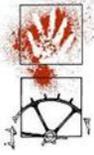


Figure 2 Location of Previously Recorded Sites.



4. Cultural Heritage Assessment

There have been a number of archaeological surveys conducted in the Jumping Creek Estate area over the last 40 years. The Jumping Creek area was first surveyed by Boot and Heffernan (1989), and then later that year by Kuskie (1989). Boot and Heffernan recorded 20 new sites, JC 1-20, during a survey for the initial rezoning of the Jumping Creek estate. Kuskie surveyed the area as part of investigations for an undergrad thesis, he recorded 4 new site locations and refound 18 of the 20 sites recorded by Boot and Heffernan. He also introduced a new naming system for the sites, JCV1 – JCV20 respectively. The site was revisited by Navin Officer in 2004, and a survey was undertaken for a rezoning proposal, two new sites and a potential archaeological deposit, JC21, JC22, and JCPAD1, were located as a result of this. Saunders reassessed the significance of the Jumping Creek Estate site as part of a desktop assessment in 2007, finding it to be of low to medium significance, as the site types and densities are not unique to the region, as was originally suggested by Boot and Heffernan in 1989.

In 2009, NSW Archaeology Pty Ltd conducted a heritage assessment for the *Proposed Jumping Creek Rezoning*. The study included indigenous and non-indigenous heritage. The 2009 report tabulated all previous Aboriginal site recordings, subsumed most of them into new sites and renamed them. This resulted in twenty-nine Aboriginal sites being identified within the Jumping Creek Rezoning Area.

The twenty-nine Aboriginal sites previously identified in the study area by NSW Archaeology Pty Ltd in 2009 were all stone artefact scatters. None of the Aboriginal sites recorded in the 2009 study were assessed as having a high potential for subsurface artefacts to be present, apart from one small area SU9/L1. Two other sites have been identified outside of the proposed development zone, SU16 and SU18/L2, and are predicted to have subsurface potential of moderate local scientific significance. The 2009 report recommended that if impacts were proposed at these two locations that salvage excavation be undertaken. The remainder of the rezoning study area was assessed as having low to negligible potential to contain subsurface archaeological deposit given the skeletal nature of the soils, erosion to bedrock and high levels of prior disturbance.

Since 2009 a number of sites have been added to the AHIMS registrar within the site boundary, including JCR1, JCR2a, JCR2, JCR12/14, SJC3 AND ED7. JCR1, JCR2, JCR12/14 were recorded by NOHC in 2009, salvaged in 2010, and were subsequently relocated and reburied at site no# 57-2-683 (JCR2a) under AHIP No# 3252. ED7 is an isolated find and was recorded by an OEH staff member in 2015.



5. Previously Recorded Sites and PADs

Site No#	AHIMS Site ID	Easting	Northing	Previous recordings	Recorded Artefacts	Condition	Subsurface Potential
SU1 /L1	57-2-0074 57-2-0087	704442	6083293	JC9 JCV4 JCV5	101	Highly disturbed	No, skeletal soil eroded to bedrock
SU1 /L2	57-2-0077 57-2-0078 57-2-0079	704614	6083124	JC12 JC13 JC14 JCV1 JCV2	7	Highly disturbed	No, skeletal soil eroded to bedrock
SU2 /L1	57-2-0079	705183	6082958	Possibly JCV14	12	Highly disturbed	No, skeletal soil eroded to bedrock
SU2 /L2	57-2-0610	705247	6083037	Nil	6	Highly disturbed	No, skeletal soil eroded to bedrock
SU2 /L3	57-2-0611	705222	6083049	Nil	4	Highly disturbed	No, skeletal soil eroded to bedrock
SU2 /L4	57-2-0612	705177	6083046	Nil	2	Highly disturbed	No, skeletal soil eroded to bedrock
SU2 /L5	57-2-0073	705149	6083149	JC8 JCV13	8	Highly disturbed	No, skeletal soil eroded to bedrock
SU3 /L1	57-2-0613	705131	6083344	Nil	2	Highly disturbed	No, landform not sensitive
SU4 /L1	57-2-0071	705154	6083423	JC6 JCV9	23	Highly disturbed	No, skeletal soil eroded to bedrock
SU5 /L1	57-2-0071	704961	6083373	JC6 JCV10 JCV11	89	Highly disturbed	No, skeletal soil eroded to bedrock
SU6 /L1	57-2-0614	705027	6083305	Nil	4	Highly disturbed	Yes, high disturbance
SU6 /L2	57-2-0072	705029	6083225	JC7 JCV12	8	Highly disturbed	Yes, high disturbance
SU7 /L1	57-2-0068 57-2-0069	704597	6083396	JC3 JC4 JCV7 JCV8	188	Highly disturbed	No, skeletal soil eroded to bedrock
SU9 /L1	57-2-0066	704424	6083408	JC1	5	Highly disturbed	No
SU10 /L1	57-2-0615	704686	6083528	Nil	5	Highly disturbed	No, skeletal soil eroded to bedrock
SU10 /L2	57-2-0616	704724	6083445	Nil	2	Highly disturbed	No, skeletal soil eroded to bedrock



Site No#	AHIMS Site ID	Easting	Northing	Previous recordings	Recorded Artefacts	Condition	Subsurface Potential
SU11 /L1	57-2-0617	704842	6083459	Nil	7	Highly disturbed	No, skeletal soil eroded to bedrock
SU12 /L1	57-2-0069	704790	6083311	JC4 JCV8	30	Highly disturbed	No, high disturbance
SU13 /L1	57-2-0089	705028	6082808	JCV15	1	Highly disturbed	No, skeletal soil eroded to bedrock
SU13 /L2	57-2-0084	704960	6082792	JC19 JCV16	10	Highly disturbed	No, skeletal soil eroded to bedrock
SU15 /L1	57-2-0618	704461	6082470	Nil	1	Moderately disturbed	No, skeletal soil eroded to bedrock
SU15 /L2	57-2-0619	704402	6082703	Nil	1	Low	No, skeletal soil eroded to bedrock
SU15 /L3	57-2-0620	704505	6082657	Nil	1	Low	No, skeletal soil eroded to bedrock
SU15 /L4	57-2-0621	704535	6082789	Nil	4	Low/ moderate	Yes, Small toe slope
SU17 /L1	57-2-0089 57-2-0081 57-2-0082 57-2-0083	704911	6083072	JC15 JC16 JC17 JC18 JCV17 JCV18 JCV19 JCV20	82	Moderate	Yes, however high disturbance and shallow soil
SU18 /L1	57-2-0622	704905	6083286	Nil	3	Low/ moderate	No
SU18 /L2	57-2-0623	704910	6083267	Nil	2	Moderate	Yes
SU19 /L1	57-2-0076	704604	6082935	JC11 JCV1	2	Very low	No, skeletal soil eroded to bedrock. High erosion
SU19 /L2	57-2-0075	704338	6083269	JC10	2	Very low	No
JC5	57-2-0070	704700	6083000	Nil			
JC20	57-2-0085	704250	6082350	Nil			
JCV3	57-2-0086	704600	6083050	Nil			
JCR2a	57-2-0683	704421	6083312	Nil	130	n/a	Return to country location
JCR2	57-2-0635	704476	6083278	Nil	10	Highly disturbed	No, skeletal soil eroded to bedrock
JCR12/14	57-2-0682	704638	6083018	JC 12 JC14	24	Disturbed	No, skeletal soil, shallow profile
JCR1	57-2-0634	704589	6082951	Nil	15	Highly disturbed	Moderate, however all deposits are likely to be highly disturbed
SJC3	57-2-0097	704990	6082530	Nil			
ED7	57-2-0945	704497	6083379	Nil	1	Not recorded	Not recorded



6. Methodology

Based on the recommendations provided in the 2009 Rezoning Report, and the time elapsed since the assessment, NOHC anticipates the following Aboriginal cultural heritage works will be required.

Where development impact is anticipated an Aboriginal archaeological survey of areas will be conducted. An archaeological technical paper will be prepared in accordance with the Code and an Aboriginal Cultural Heritage Assessment Report (ACHAR) in accordance with the OEH *Guide to investigation, assessing and report on Aboriginal cultural heritage in NSW*.

Additionally, the 2009 report recommended salvage excavation in Units 9/L1, 16 and 18/L2 if these areas were going to be impacted. Unit 9/L1 has been subject to salvage as part of the Ellerton Drive Extension project and as such, the site has been destroyed. As part of the archaeological survey all of the sites will be reassessed, including SU18/L2, in light of the current knowledge and the level of testing required within the project area will be determined.

QPRC/NSW Planning may also require that separate testing occurs prior to development.

Field Equipment:

The field team will carry the required field recording equipment: such as compass, GPS, site forms, maps, camera and notebook; and required safety equipment such as first aid kits, mobile phones and two way radios.

Field Assessment of the recorded sites Will Involve:

1. Site recording

- GPS positions will be logged for the site including each individual artefact location.
- One or more digital photographs will be taken and logged, showing the general context of the site.

2. Field Consultation with Representative Aboriginal Parties (RAPs)

RAPs will be invited to participate in the field survey according to the protocol defined below. Aboriginal field participants will be invited to communicate any knowledge that they may have regarding the cultural heritage values of the study area, archaeological and cultural sites, and the overall landscape.

The project team will conduct the cultural assessment program in a culturally sensitive manner and treat the information provided with respect (and in confidence, where requested and required).

The results of the investigation will be documented in a report, consistent with Office of Environment and Heritage NSW OEH: *Code of Practice for Aboriginal cultural heritage consultation requirements for proponents 2010* and *Guide to Investigating, Assessing and reporting on Aboriginal Cultural heritage in NSW*. Management recommendations and information surrounding cultural significance, based on the input received from the Registered Aboriginal Parties (RAPs), will be incorporated into the ACHAR.

7. Registered Aboriginal Party Participation in Field Work

The proponent is committed to providing an opportunity to the representatives of registered Aboriginal parties to participate in the conduct of the field program.

8. Cultural Input from Registered Stakeholders



In order to assess the possible impacts of this proposed development, it is important to assess any potential effects on Aboriginal cultural values. Only Aboriginal people can assess the impacts to Aboriginal cultural values, therefore you (or your organisation or group) are asked to identify whether there are any Aboriginal objects or places of cultural value to Aboriginal people in the area of the project. We also seek your views of the potential management options for any sites/objects that may be found in the project area during the investigation.

To do this, you (or your organisation or group) are invited to provide a written submission on its views. Your report will be provided to government authorities responsible for making decisions about the development proposal.

Your report will be most effective if it is provided on the letterhead of your organisation and signed by an executive office holder.

Your report will be included in the cultural heritage assessment report. The draft cultural heritage assessment report will be provided to registered stakeholders for comment. Comments and the assessment of potential development impacts on cultural sensitivity conducted by the participants will then be incorporated into the survey report where appropriate.

9. References

Boot, P. and K. Heffernan 1989 *Jumping Creek. Local Environmental Study. Preliminary Archaeological Survey*. Report to Kinhill Engineers Pty Ltd.

Kuskie, P. J. 1989 *Changing Land Use Patterns from Prehistoric to Modern Times at Jumping Creek Valley, Queanbeyan, New South Wales*. Unpublished B.A. Hons Thesis, Australian National University, Canberra.

Navin Officer Heritage Consultants 2004 *Jumping Creek Queanbeyan NSW, Archaeological Survey*. Report to Greater Queanbeyan City Council.

NSW Archaeology Pty Ltd. 2009 *Proposed Jumping Creek Rezoning, Queanbeyan, NSW, Aboriginal Archaeological Assessment*. A Report to Canberra Investment Corporation.

Saunders, P. 2007 *Jumping Creek Estate, Cultural Heritage Assessment, Desktop Study*. Report to Parsons Brinckerhoff Pty Ltd.



Methodology Responses:

From: Muragadi <muragadi@yahoo.com.au>
Sent: Monday, 20 August 2018 3:49 PM
To: Nicola Hayes <nhayes@nohc.com.au>
Subject: Jumping creek estate project methodology

Dear Nicola,

I have read the methodology for the Jumping creek estate project and endorse the recommendations made by Navin Officer Heritage.

Kind regards

Jesse

From: Shaun Carroll <Merrigarn@hotmail.com>
Sent: Monday, 20 August 2018 3:50 PM
To: Nicola Hayes <nhayes@nohc.com.au>
Subject: Jumping creek estate project.

Hi Nicola,

I have read and agree with the project information and methodology for the above project, I look forward to hearing from you.

Kind regards

Shaun



From: Ryan Johnson <murrabidgeemullangari@yahoo.com.au>
Sent: Monday, 20 August 2018 3:47 PM
To: Nicola Hayes <nhayes@nohc.com.au>
Subject: Jumping Creek Estate Project methodology

Hi Nicola,

I have read the project information and methodology for the above project and endorse the recommendations made by Navin Officer Heritage.

Kind regards

Ryan Johnson | **Murra Bidgee Mullangari**



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147

E: murrabidgeemullangari@yahoo.com.au

ICN: 8112



From: Wally Bell <walbell@bigpond.net.au>
Sent: Sunday, 2 September 2018 1:51 PM
To: Nicola Hayes <nhayes@nohc.com.au>
Cc: Kazdenny@hotmail.com.au
Subject: RE: Jumping Creek OEH Consultation

Hi Nicola,

Thanks for the provision of the proposed methodology for this project. As you are undoubtedly aware BNACC has participated in prior Aboriginal cultural assessments for this area. It is with this knowledge that BNACC does have a concern about the impacts of the proposed project on the Aboriginal Cultural significance of this area. BNACC would like to state that the proposed methodology is the normal practice but given the large number of site impacts would like to undertake a consultation process in the overall planning practice to try and preserve some of those sites, *i.e. landscape architecture*, instead of the usual salvage and destroy.

In essence BNACC is in agreement with the methodology but would like to seek an alternative approach for a better outcome for our quite significant cultural presence in this area.

Regards,

Wally Bell



Traditional Custodian Group

PO Box 255 Kippax ACT 2615

Mb: 0419 425347

www.buru-ngunawal.com



Draft Report Responses

From: Marilyn Carroll-Johnson <corroboreecorp@bigpond.com>
Sent: Friday, 7 December 2018 12:17 PM
To: Nicola Hayes <nhayes@nohc.com.au>
Subject: Re: Jumping Creek Report

Hi Nicola

We see no issues with the project. We agree with your report. Thanks

Kind regards

Marilyn Carroll-Johnson

Director CAC

From: Shaun Carroll <Merrigarn@hotmail.com>
Sent: Wednesday, 5 December 2018 11:21 AM
To: Nicola Hayes <nhayes@nohc.com.au>
Subject: Re: Jumping Creek Report

Hi Nicola,

I have read the information and recommendations made by Navin Officer Heritage, I agree with this recommendations for the Jumping Creek project.

Thanks

Shaun Carroll



APPENDIX 2

AHIMS REGISTER SEARCH RESULTS



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
57-2-0909	ED3 - Ellerton Drive 3 <u>Contact</u>	GDA	55	704158	6083102	Open site	Destroyed	Artefact: -	Permits 3843	103667
57-2-0919	ED5 - Ellerton Drive <u>Contact</u>	GDA	55	704285	6083346	Open site	Destroyed	Artefact: 4	Permits 3843	103667
57-2-0918	ED4 - Ellerton Drive <u>Contact</u>	GDA	55	704356	6083417	Open site	Destroyed	Artefact: 1	Permits 3843	103667
57-2-0619	Jumping Creek SU15/L2 <u>Contact</u>	GDA	55	704402	6082703	Open site	Valid	Artefact: 1	Permits 3843	101510
57-2-0683	JCR2a <u>Contact</u>	GDA	55	704421	6083312	Open site	Valid	Artefact: 3	Permits	102088,103667
57-2-0910	ED6 - Ellerton Drive 6 <u>Contact</u>	GDA	55	704458	6083504	Open site	Partially Destroyed	Artefact: -	Permits	103667
57-2-0618	Jumping Creek SU15/L1 <u>Contact</u>	GDA	55	704461	6082470	Open site	Valid	Artefact: 1	Permits 3843	101510
57-2-0635	JCR2 <u>Contact</u>	GDA	55	704476	6083278	Open site	Destroyed	Artefact: -	Permits	103667
57-2-0945	Ellerton Drive 7 <u>Contact</u>	GDA	55	704497	6083379	Open site	Valid	Artefact: 1	Permits 3252,3843	103667
57-2-0620	Jumping Creek SU15/L3 <u>Contact</u>	GDA	55	704505	6082657	Open site	Valid	Artefact: 1	Permits 3843	101510
57-2-0621	Jumping Creek SU15/L4 <u>Contact</u>	GDA	55	704535	6082789	Open site	Valid	Artefact: 4	Permits	101510
57-2-0684	JCR1a <u>Contact</u>	GDA	55	704589	6082951	Open site	Valid	Artefact: 3	Permits	102088
57-2-0634	JCR1 <u>Contact</u>	GDA	55	704589	6082951	Open site	Valid	Artefact: -	Permits	102088
57-2-0682	JCR12/L4 <u>Contact</u>	GDA	55	704638	6083018	Open site	Valid	Artefact: -	Permits 3252	102088
57-2-0615	Jumping Creek SU10/L1 <u>Contact</u>	GDA	55	704686	6083528	Open site	Valid	Artefact: 5	Permits	101510
57-2-0616	Jumping Creek SU10/L2 <u>Contact</u>	GDA	55	704724	6083445	Open site	Valid	Artefact: 2	Permits	101510
57-2-0617	Jumping Creek SU11/L1 <u>Contact</u>	GDA	55	704842	6083459	Open site	Valid	Artefact: 7	Permits	101510

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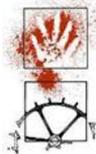
Extensive search - Site list report

Your Ref/PO Number : Jumping Creek EN
Client Service ID : 360550

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
57-2-0622	Jumping Creek SU18/L1 <u>Contact</u>	GDA	55	704905	6083285	Open site	Valid	Artefact : 3	Permits	101510
57-2-0623	Jumping Creek SU18/L2 <u>Contact</u>	GDA	55	704910	6083267	Open site	Valid	Artefact : 2	Permits	101510
57-2-0614	Jumping Creek SU6/L1 <u>Contact</u>	GDA	55	705027	6083305	Open site	Valid	Artefact : 4	Permits	101510
57-2-0613	Jumping Creek SU3/L1 <u>Contact</u>	GDA	55	705131	6083344	Open site	Valid	Artefact : 2	Permits	101510
57-2-0612	Jumping Creek SU2/L4 <u>Contact</u>	GDA	55	705177	6083046	Open site	Valid	Artefact : 2	Permits	101510
57-2-0611	Jumping Creek SU2/L3 <u>Contact</u>	GDA	55	705222	6083049	Open site	Valid	Artefact : 4	Permits	101510
57-2-0610	Jumping Creek SU2/L2 <u>Contact</u>	GDA	55	705247	6083037	Open site	Valid	Artefact : 6	Permits	101510
57-2-0075	JC10; <u>Contact</u>	AGD	55	704200	6083100	Open site	Valid	Artefact : -	Permits	1579,103667
57-2-0066	Jumping Creek 1; <u>Contact</u>	AGD	55	704200	6083200	Open site	Destroyed	Artefact : -	Permits	1579,103667
57-2-0067	Jumping Creek 2; <u>Contact</u>	AGD	55	704200	6083450	Open site	Valid	Artefact : -	Permits	1579
57-2-0068	JC3; <u>Contact</u>	AGD	55	704200	6083450	Open site	Valid	Artefact : -	Permits	1579
57-2-0085	JC 20; <u>Contact</u>	AGD	55	704250	6082350	Open site	Valid	Artefact : -	Permits	1579
57-2-0074	JC9; <u>Contact</u>	AGD	55	704263	6083335	Open site	Destroyed	Artefact : -	Permits	1579,103667
57-2-0087	JCV 4; <u>Contact</u>	AGD	55	704300	6083050	Open site	Valid	Artefact : -	Permits	1579
57-2-0090	SJC 7; <u>Contact</u>	AGD	55	704320	6082100	Open site	Valid	Artefact : -	Permits	1877,102775
57-2-0430	Jumping Creek, Queanbeyan - JC21 <u>Contact</u>	AGD	55	704370	6083579	Open site	Valid	Artefact : 3	Permits	99378
57-2-0428	Jumping Creek, Queanbeyan - JC1 <u>Contact</u>	AGD	55	704402	6083415	Open site	Destroyed	Artefact : 1	Permits	99378,103667

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Your Ref/PO Number : Jumping Creek EN
Client Service ID : 360550

SiteID	SiteName	Contact	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
57-2-0429	T Russell Jumping Creek, Queanbeyan - JCV6	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd	55 704409	6083462	Open site	Valid	Artefact : 1	Permits	3843 99378
57-2-0432	T Russell Jumping Creek, Queanbeyan - JCPAD1	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd	55 704450	6083465	Open site	Valid	Potential Archaeological Deposit (PAD) :-	Permits	99378
57-2-0431	T Russell Jumping Creek, Queanbeyan - JC22	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd	55 704497	6083466	Open site	Valid	Artefact : 3	Permits	99378
57-2-0079	T Russell JC14;	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd	55 704500	6082950	Open site	Valid	Artefact : -	Permits	1579,102088
57-2-0076	JC11;	Contact	Recorders	H Cooke	55 704550	6082800	Open site	Valid	Artefact : -	Permits	1579
57-2-0077	JC12;	Contact	Recorders	H Cooke	55 704550	6082850	Open site	Valid	Artefact : -	Permits	1579,102088
57-2-0069	JC4;	Contact	Recorders	H Cooke	55 704550	6083200	Open site	Valid	Artefact : -	Permits	1579
57-2-0078	JC13;	Contact	Recorders	I Coates	55 704600	6082900	Open site	Valid	Artefact : -	Permits	1579
57-2-0086	JCV 3;	Contact	Recorders	H Cooke	55 704600	6083050	Open site	Valid	Artefact : -	Permits	1579
57-2-0070	JCV5;	Contact	Recorders	Mr.Peter Kuskie	55 704700	6083000	Open site	Valid	Artefact : -	Permits	1579
57-2-0081	JCV16;	Contact	Recorders	Philip Boot	55 704750	6082850	Open site	Valid	Artefact : -	Permits	1579
57-2-0071	JCV6;	Contact	Recorders	Mr.K Heffernan	55 704750	6083150	Open site	Valid	Artefact : -	Permits	1579
57-2-0099	JCV1;	Contact	Recorders	Philip Boot	55 704800	6082300	Open site	Valid	Artefact : -	Permits	1877
57-2-0096	JCV4;	Contact	Recorders	Jon Winston-Gregson	55 704800	6082530	Open site	Valid	Artefact : -	Permits	1877
57-2-0080	JCV15;	Contact	Recorders	Jon Winston-Gregson	55 704800	6082950	Open site	Valid	Artefact : -	Permits	1579
57-2-0084	JCV19;	Contact	Recorders	Mr.K Heffernan	55 704850	6082650	Open site	Valid	Artefact : -	Permits	1579

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Your Ref/PO Number : Jumping Creek EN
Client Service ID : 360550

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
57-2-0093	SJC 8; Contact	AGD Records	55	704900	6082120	Open site	Valid	Artefact :-	Open Camp Site	1877,102775
57-2-0089	JCV 15; Contact	AGD Records	55	704900	6082700	Open site	Valid	Artefact :-	Open Camp Site	1579
57-2-0083	JC 18; Contact	AGD Records	55	704900	6082750	Open site	Valid	Artefact :-	Open Camp Site	1579
57-2-0082	JC 17; Contact	AGD Records	55	704900	6082850	Open site	Valid	Artefact :-	Open Camp Site	1579
57-2-0098	SJC 2; Contact	AGD Records	55	704920	6082370	Open site	Valid	Artefact :-	Open Camp Site	1877
57-2-0088	JCV 14; Contact	AGD Records	55	704950	6082900	Open site	Valid	Artefact :-	Open Camp Site	1579
57-2-0072	JC7; Contact	AGD Records	55	704950	6083000	Open site	Valid	Artefact :-	Open Camp Site	1579
57-2-0097	SJC 3; Contact	AGD Records	55	704990	6082530	Open site	Valid	Artefact :-	Open Camp Site	1877
57-2-0073	JC8; Contact	AGD Records	55	705050	6083000	Open site	Valid	Artefact :-	Open Camp Site	1579

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APPENDIX 3

HERITAGE ITEMS



JCH1 – Shearing shed complex

GPS (WGS 84): 704742.6083351

Jumping Creek historical item 1 (JCH1) includes the site previously recorded by Kuskie (1989) as H3. This item is located across the crest of a spur in the northwest of the study area. It comprises the remains of a shearing shed, concrete sheep dip and various associated buildings and fences. The site extends in the south from 704737.608338, where there are deciduous trees growing adjacent various building remains and 20th century artefacts associated with a disturbed area that may be the remains of a building platform, through to 704726.6083384, where there are the remains of a small animal enclosure, evidenced by timber remains, post holes, chicken wire and partial stone footings.

Across the centre of the site there are various wooden stumps and fence post remains adjacent a concrete sheep dip that extends for about 10 metres to the east of a concrete pad. There are remains of fencing surrounding both the pad and the dip and there is a low earth and stone mound bordering the dip on the southern side. The entrance to the sheep dip was in the north, the channel then turning towards the west where the sheep would climb up onto the concrete area that drains back into the dip. The concrete pad is presumed to be the drying pen.

Immediately adjacent to the northwest of this pen there are the remains of at least eight stumps and ten other post holes that appear to correspond to the footings of a building measuring ca. 5 x 6 metre (704717.6083356). This is thought to be the remains of a small shearing shed, which based on the quantities of corrugated iron lying around, was originally clad in that material.

Additional post remains to the east of these footings appear to be part of a set of pens associated with the dip and the shed. There is a large boobialla tree growing in the middle of this area, which presumably postdates the yards.

Approximately 5m to the north of the shed and associated yards and dip there is a plane tree with a series of post holes and at least one post located on the western side. These features appear to delimit the boundary of a smaller structure (704719.6083371). Once again the pieces of galvanised and corrugated iron on and adjacent this feature indicate an iron clad building, probably a shed of some form. Additional fence remains can be found to the east of this structure.

Approximately 40 metres to the east of JCH1 and possibly associated with that complex, there are the remains of a small concrete structure set into the lower slopes of the spur (704780.6083368). The item in question measures 1.7 x 1.2 metre and is at least 0.7 metres deep. The base of the pit is filled with local limestone rubble; it is unclear how far the structure actually extends into the ground. There are remains of metal hinges and a latch point for a cover that was once fitted over the pit. It is unclear exactly what purpose this feature served, although it is likely to have been used as a storage area and given the way in which it is set into the ground it may have been an insulated store for foodstuffs or a form of magazine for storing gunpowder or similar explosives. The latter is perhaps more likely given the separation between this feature and the other structures on the crest to the west.

A short distance to the east (704804e 6083366n) there are the disturbed remains of building footings in the form of various wooden stumps across an area that has been subject to mechanical disturbance such as ripping.

Across the whole site there are various artefacts and pieces of building materials. Corrugated iron and other types of sheet metal are particularly common. Other artefacts include bottle glass, various ceramic fragments, tins, tent pegs, an enamel pot lid, and pieces of fibro cement. The artefacts appear to largely be indicative of 20th century occupation. In addition to the building remains and surface artefacts there are a number of introduced plant species including oak, roses and at least one fruit tree (peach). The presence of these species is likely to be indicative of a domestic dwelling, which is further supported by the presence of bottle glass and ceramic fragments.



Overall the area appears to be relatively undisturbed, although the southern and western sides have been impacted to some extent by vehicular tracks. The possible building platform to the south of the sheep dip also appears to have been subject to substantial disturbance, possibly associated with camping and/or bottle hunting activities.

Excavation potential across the site varies from fair to very good. It is probably highest across the area of the shearing shed and adjacent building to the north.

While it is unclear exactly how old this site may be, it appears to date to at least the first half of the 20th century and possibly earlier. There is clearly evidence for sheds, animal yards and a sheep dip as well as some form of storage area that is possibly a magazine. The artefacts and flora are also indicative of a domestic residence, which suggests that the complex actually relates to a homestead and associated sheds and yards.

It is probable that the complex relates to the Willis family and possibly the activities of the Gibbs family.

JCH2 – Mine shaft

GPS (WGS84): 705178.6083390

Located on the crest of a spur in the northeast of the study area there is a single mine shaft that was previously recorded by Kuskie (1989) as site H1. The shaft itself measures approximately 1.5 x 2 metre and is around 15-20 metres deep. There is a 6 x 6 metre area of spoil built up around the shaft, this pile of spoil is up to 2m high. There is a wooden stump in the spoil on the southern side of the shaft that may be either the remains of a dead tree or part of the headgear associated with the shaft. In addition there is a eucalypt that has grown out of the side of the shaft on the northern side. There are no artefacts visible on or adjacent this item and there are no other obvious associated features nearby.

It is unclear what was being mined at this site, however given the depth of the shaft, amount of associated spoil and absence of other associated features, it is likely that this represents a relatively short lived and largely exploratory venture.

On the basis of the available history for Jumping Creek it is likely that this site relates to late nineteenth century mining activities.

JCH3 – Limestone quarry

GPS (WGS84): 705289.6082752 – 705336.6082696

This site comprises a large limestone quarry and associated spoil heap in the far south-eastern corner of the study area; it was previously recorded by Kuskie (1989) as site H2. The quarry itself measure approximately 45 x 20 metres and is around 8 metres deep at its deepest point in the south-eastern end. There are no obvious signs of tool marks on the face of the quarry. From the entrance to the quarry, at the north-western end, there is a shallow road cutting that leads down to the remains of two limekilns constructed of brick (JCH4). Immediately to the southwest of the quarry entrance (705289.6082752) there is a large area of spoil that measures approximately 20 x 15 metres and is up to 5 metres high. This area presumably relates to the dumping of quarried materials that were unsuitable for burning and was probably also used to break up the limestone prior to slaking.

Approximately 20m to the north of this spoil area there is a shallow circular depression dug into the hill slope on the northern side of the access track (705313.608277). This feature is about 5 metres across and is built up ca. 0.5m on the southwestern side. There is a large deciduous tree growing out of the centre of this feature. It is unclear what this feature may be, although it may have been a trial/temporary kiln area where the quarried limestone was burnt prior to construction of the nearby brick kilns.



This site is in good condition and shows minimal signs of disturbance. There is a car body dumped in the quarry and remains of a fence line around the quarry edge at the south-eastern end.

Given the apparent association between the quarry and JCH4 (see below) it is likely that this item relates to lime extraction during the late 1920s-1930s.

JCH4 – Brick limekilns

GPS (WGS84): 705221.6082866.

This site was previously recorded by Kuskie (1989) as H4. It is located on the lower slopes on the north-eastern side of Jumping Creek, about 150 metres northwest of the quarry entrance.

The site comprises two kilns measuring between 3.0 metres and 2.6 metres long and 2.4 metres wide. Both kilns are built into the hill slope with spoil built up around the western and eastern sides. Along the southern face the exterior of the eastern kiln, which is the larger of the two, is visible as a wall of brick with limestone buttressing at the south-eastern corner. The brickwork is 2.5 metres high; it is laid in Flemish bond and is braced with pieces of railway track and wooden posts. Much of the wall is in poor condition with many of the bricks missing. At the base of the wall there are two arched apertures that formed the flues for the kiln. Kuskie (1989) describes an identical pair of flues on the western kiln.

The track from the quarry leads around the northern side of the kilns and curves down around the south before apparently re-joining the path to the quarry. It appears that both kilns were loaded with limestone from the road on the northern side and that the slaked lime was then removed via the flues on the southern side.

A small area of burnt lime is visible on a vehicle track to the west of the kilns (705205.6082881). It is assumed that this relates to an area in which the slaked lime was store or packaged prior to delivery.

The kilns themselves appear to be in fair condition, although both are very heavily overgrown. It is unclear whether there are remains of additional structures located in areas adjacent the kilns. The kilns and the surrounding area are likely to have very good excavation potential.

JCH5 – Limestone quarries

GPS (WGS84): 704733.6083200 & 704696.6083262

Located on the western bank of the creek at the confluence of Jumping Creek and its northern tributary (704733.6083200) there is a substantial limestone cliff that appears to have been exploited as a quarry. This location corresponds to the previously recorded site H7 (Kuskie 1989).

The cliff is approximately 8 metres high and 20 metres long. There is an area about 10 metres wide in front of the cliff that is littered with broken limestone and some modern building rubble. This area appears to correspond to the quarried section of the cliff and was presumably also used for processing, or breaking up, the quarried limestone.

To the north of this area there is an overgrown track that leads past item JCH6 and continues up around the hill to the northwest. Approximately 60 metres to the northwest of this quarry there is a cutting into the hillside that measures ca. 15 x 20 x 3 metres (704696.6083262). This area is quite overgrown; however there appear to be a number of limestone blocks in and around the feature. The abovementioned path winds around the north-eastern side of this feature, which corresponds with the entrance to the cutting. It is possible that this area also



contains the remains of a limestone quarry, although that could only be confirmed through more detailed survey, including some vegetation clearance.

Both of these apparent quarry features are situated within 40 metres of item JCH6 (see below) and both are located adjacent a path that links all three features and continues northwest out of the study area towards Queanbeyan.

JCH6 – Lime kiln

GPS (WGS84): 704736.6083248

Situated almost equidistant between the two limestone quarries described above there is a circular stone lined pit built into the hillslope on the eastern side of the track that joins the three features and immediately west of the existing vehicular track. This pit measures approximately 5 metres across and 1.5 metre deep, it is heavily overgrown with blackberries and as such the front of the structure could not be recorded. Nevertheless, on the south-eastern side there is a level area that appears to have been culturally formed. The stone used to line the pit is local limestone rubble.

Given the problems of visibility it is difficult to be certain about the function and age of this site. It does however appear likely to be the remains of a limekiln, a hypothesis that is supported by the association with the track and quarries. As with the brick lined kilns at JCH4 this site has access from the road on the upslope side and a potential area for storage and packaging of slaked lime adjacent on the downslope side.

Additional survey work, including vegetation clearance, would be necessary at this site and the adjacent features that comprise JCH5 in order to clarify the nature of these items. Nonetheless, the evidence does suggest that this complex may relate to the extraction and burning of limestone that was undertaken by the Gibbs brothers in the 19th century, which would make it the oldest known limestone kiln in the local area. Given the general proximity to JCH1 it is possible that all of these features relate to the pastoral and industrial activities of the Gibbs family. This possibility would also potentially explain the function of the concrete pit at JCH1, which may then have been a powder magazine for storing explosives used in the quarrying process.

This site appears to be in relatively good condition despite being so overgrown, it displays good excavation potential.

JCH7 – Mine workings

GPS (WGS84): 705028.6082899 – 704944.6083027

This recording comprises a series of mining features over an area measuring 170 metres north-south and 60 metres east-west. Within this area there are various pits, adits and an open cut mine; the latter corresponding to the open quarry recorded by Kuskie (1989) as site H6.

Along the eastern margin of this area there are three areas of diggings with associated mullock heaps. The southernmost is a 5-8 metres wide cutting (705028.6082899) that runs downslope with mullock piled at the bottom, the next is a cutting measuring ca. 10 x 5 metres (704999.6082959) that is very overgrown. At the northern end there is a larger area of workings (704997.6082985 – 705001.6083021) with what appears to be an adit leading in from the north and a pile of mullock stacked on the eastern side. The diggings extend for approximately 40 metres in length and average about 5m in width.

Approximately 20-30 metres west of these workings there is a large open area cutting (704976.6082949 – 704944.6083027) that extends for about 80m north-south and around 20 metres across. Along the centre of this feature there is an outcrop of bedrock extending north-south that presumably relates to the ore lode that was being exploited.



This feature appears to be the shallow pit referred to by Kinhill (1989), although presumably it is related to the early 20th century mining of lead, copper, zinc and gold documented by IT Engineering (1999).

All of these diggings are situated in close proximity to the processing area (JCH8) and associated camp site (JCH9), which appear to be dominated by building materials and artefacts indicative of 20th century occupation.

As a whole the diggings are in good condition.

JCH8 – Ore processing area

GPS (WGS84): 704921.6083072

Immediately to the north of the open cut diggings there are the remains of three relatively large structures that are described by Kuskie (1989) as H5: structures A, B and C. Kuskie interprets these features as stock yards and troughs. As noted by IT Engineering (1999) this area actually appears to be the processing area for the adjacent mine.

The complex covers an area of some 60 x 60 metres. The three main structures are evidenced by brick and concrete footings and drainage channels and the timber remains of the building frame. In addition there are the remains of concrete pads, sections of fencing and remains of a smaller stone structure on the north-eastern side.

The building remains appear to be in a relatively stable condition, although they are all very heavily overgrown. The extent of vegetation precluded any more detailed survey.

Artefacts visible across the surface included mass produced bricks, galvanised corrugated iron, glass fragments and bullet head nails. All of these items are indicative of a 20th century site, which suggests that this is indeed the processing area for the early 20th century lead, copper, zinc and gold mining documented by IT Engineering (1999).

This complex is relatively undisturbed and displays good excavation potential.

JCH9 – Miners' camp

GPS (WGS84): 704918.6083130

Immediately to the north of the track that extends around the northern side of JCH8 there is a level area above the creek that displays evidence of human occupation. The area measures approximately 30 x 20 metres and there are the remains of at least one building, which is evidenced by an ephemeral earth platform (c. 4 x 4 metres) with remnants of stone footings and a possible hearth area. Additional more ephemeral platforms may be present, particularly to the north where the vegetation becomes very thick and obscures visibility.

Artefacts are scattered over the area and include handmade, wire and rhomboid head nails, bottle glass, brown and white glaze ceramics and buckles from saddlery or clothing. The artefacts appear to be representative of late 19th to early 20th century occupation.

The area is relatively undisturbed and display good excavation potential, particularly across the identified structure. The presence of additional features with excavation potential could only be confirmed by more detailed survey and vegetation clearance.

It is assumed that this site is the miners' camp for the adjacent mine and processing area.

JCH10 – Mine shafts

GPS (WGS84): 704509.6082662 – 704522.6082672



This recording is located on the western slopes of a drainage line in the southwest of the study area; it comprises two mine shafts that appear to correspond with those described by Kinhill (1989).

Each shaft measures around 2 metres across and is surrounded by a low mound of spoil that extends around 5-8 metres across. The eastern most shaft appears to be around 15m deep while the western one is somewhat smaller.

Given the size of the shafts they probably represent short term mining or prospecting activity. It is possible that they are also associated with mine workings at JCH13 and/or the nearby domestic site at JCH11.

JCH11 – Domestic site

GPS (WGS84): 704480.6082728

Situated at the northern end of the ridge on which features JCH10 and JCH13 are located there are the remains of several structures and a series of earthworks.

The main building remains are located in the southwest of the complex (704476.6082727) and comprise an overgrown L-shaped platform with stone footings and a possible hearth at the eastern end. In addition to the stone footings there are a few hand pressed bricks scattered around the northern side of the platform, where there are also various pieces of machinery. A couple of metres to the southeast of the platform there is a circular feature measuring approximately 2 metres across, with stones around the northern half. This feature is set into the ground slightly. A few metres further to the southeast there is a small pile of burnt lime and to the north of this there are more ephemeral structural remains including a line of stones along the eastern margin of a level area of ground.

To the northeast of this cluster of features there are a series of earthworks (704483.6082753 – 704490.6082774 – 704524.6082733). There is a large level platform in the southwest with a stone retaining wall along the western margin and a series of narrow terraces extending off to the east and the north. It is unclear what this area was used for, although it may have been either an agricultural or industrial area.

Given the proximity to items JCH10 and JCH13, both of which are mining sites, it is possible that the complex as a whole is the residential area for those working the mines. The terraces may thus be the gardens and fields for the residence or a form of processing area associated with the mines. The circular stone feature may either be the footings for a water tank, the remains of a basic form of lime kiln or a similar type of structure.

There are very few artefacts visible on the surface at this site. Aside from the bricks and machinery pieces there are the remains of a brown two-piece moulded alcohol bottle and a few fragments of ceramic. It is difficult to ascertain a date range based on these sparse items, however the site may relate to occupation during the late 19th through to the early 20th century.

Overall the site is quite well preserved, if a little overgrown. The main structure and the associated circular feature both display very good excavation potential.

JCH12 – Building material dump

GPS (WGS84): 704633.6083356

Kuskie (1989) recorded a collection of galvanised and corrugated iron sheeting (Site H9) below and to the east of Aboriginal site JCV8. During this survey the exact location of H9 could not be ascertained, possibly because the metal sheeting has been moved during the intervening 20 years. In any case, a corrugated iron tank and a rubbish area dominated by metal sheeting were located in the gully to the west of JCH1.



None of these materials appear to be in situ as such. Given the proximity to JCH1 it is probable that these items are remains of the sheds and other buildings that once stood nearby. It is presumed that the materials recorded by Kuskie were similarly remains of structures from that complex.

JCH13 – Mine diggings

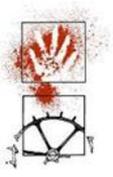
GPS (WGS84): 704415.6082503 – 704418.608590

In the far south-western corner of the study area there is a long shallow cutting located on the centre of the spur crest, approximately 150 metres southwest of JCH10. This cutting is similar to that identified at JCH7 and is presumed to be a similar sort of open cut mine.

The cutting itself is about 30 metres wide, 90 metres long and around 1-2 metres deep; some spoil is built up at the northern end of the feature.

There are no artefacts obvious on the surface and no other features adjacent.

Given the proximity to JCH10 and possible associations with JCH11 it is possible that these three features relate to the same mining activities. It is presumably the shallow prospecting cutting referred to by It Engineering (1999).



APPENDIX 4

HERTIAGE LISTING



Home > Topics > Heritage places and items > Search for heritage

Marchiori's Lime Kiln and Quarry

Item details

Name of item: Marchiori's Lime Kiln and Quarry
Type of item: Archaeological-Terrestrial
Group/Collection: Manufacturing and Processing
Category: Kiln Lime
Primary address: South East Corner, Greenleigh, NSW
Local govt. area: Queanbeyan

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
South East Corner	Greenleigh	Queanbeyan			Primary Address

Statement of significance:

Marchiori's lime kiln and quarry are significant for their important association with the construction of both Queanbeyan and the nation's capital in the late 1920s, 1930s and early 1940s. The kiln has technical significance for its ability to demonstrate lime burning techniques in the early to mid twentieth century.

Each of the kilns is considered to be significant and worthy of listing in the local heritage schedule

Date significance updated: 18 Nov 11

Note: There are incomplete details for a number of items listed in NSW. The Heritage Division intends to develop or upgrade statements of significance and other information for these items as resources become available.

Description

Physical description: A brick and stone kiln built into the side of the creek embankment. The front of the kiln has two semicircular openings at ground level. The chamber behind is approx 2.4m deep and about 3 m wide to a height of about 2 m. The front wall is about 600 mm thick. The kiln is heavily overgrown with blackberry. A contemporary photograph shows a low structure or wall above and behind the kiln. The remains of pathway lead back up to the quarry approx 100 metres to the south. The quarry is about 60 m long, 15 m wide and about 10 m deep (guestimates only). Off to the side is a large mound of spoil.

Further information: Only the Marchiori kiln has been surveyed as part of this study.

Check if other kilns have been entered.

History

Historical notes: The subject of lime kilns in the local area has been covered by Brendan O'Keefe in 'Limburners of the Limestone Plains and beyond, 1833-1943', Canberra Historical Journal, new series no. 34, September 1994, pp. 16-26. The article includes photographs of the kilns.

Marchiori's kiln was initially established by Italian immigrant F Petralia in 1924-5 who provided lime to the Canberra market as well as Queanbeyan. Petralia sold his limeburning, terrazzo and marble business to a man named Zimmery who in turn sold it to a partnership of Arminio Marchiori, Caprin and another man in 1928. (Marchiori had emigrated from Italy in 1924, settling in Queanbeyan about 1928 with his wife Edvige and son John). The partnership dissolved shortly afterwards and Marchiori ran the limeburning, terrazzo and fibrous plaster business on his own. In the late 1920s Marchiori built a second kiln attached to the northern



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side of Petralia's original kiln, thus forming a double structure. With the closure of other limeburning operations in the area around 1930, Marchiori became the sole remaining supplier of lime in the Canberra Queanbeyan area. The lime was hauled to the Federal Capital in his 30 hundredweight Chevrolet truck where it was used not only in construction, but as a fertiliser on Canberra's gardens and as a purifying agent in sewerage treatment. The limeburning operation closed in about 1943.

Other lime kilns of interest are:

The 1860-70s kiln of John and William Gibbs in Jumping Creek Valley.

The kiln of Moses Morley, now on the CSR Readymix site south of Queanbeyan. The kiln, which operated from 1876-77 through to the early 1900s, stands on either Portion 103 or 104 of the Parish of Googong.

The 1920s kiln of Charles T. Beazley at White Rocks on the Queanbeyan River.

Most, if not all, of these kilns stand within the old Queanbeyan City Council area.

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local, regional and national economies	Industry-Activities associated with the manufacture, production and distribution of goods	(none)-

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan					

Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Queanbeyan Heritage Survey - 2010	2010		Pip Giovanelli		Yes

References, internet links & images

None

Note: internet links may be to web pages, documents or images.



<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2290484>

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Data source

The information for this entry comes from the following source:

Name: Local Government

Database number: 2290484

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APPENDIX 5

STATUTORY AND POLICY CONTEXT¹

¹ The following information is provided as a guide only. Readers are advised to seek qualified legal advice relative to legislative matters.



National Parks and Wildlife Amendment Bill 2010

The National Parks and Wildlife Amendment Bill 2010 (also known as the Omnibus Bill), was implemented on 1 October 2010 to amend the *National Parks and Wildlife Act 1974* (NPW Act). Existing offences relating to Aboriginal objects and places were replaced with new offences, including a strict liability offence, along with offence exemptions and defences.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm. Harm is defined to mean destroying, defacing, damaging or moving an object from the land. There are a number of defences and exemptions to the offence of harming an Aboriginal object or place. One of the defences is that the harm was carried out under an Aboriginal Heritage Impact Permit (AHIP).

In practice, archaeologists use a methodology that groups 'Aboriginal objects' into various site classifications according to the nature, occurrence and exposure of archaeological material evidence. The archaeological definition of a site may vary according to survey objectives; however a site is not recognised or defined as a legal entity in the Act.

It should be noted that even single and isolated artefacts are protected as Aboriginal objects under the Act.

In 2010 the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* was adopted by clause 3A of the National Parks and Wildlife Regulation 2009 (NPW Regulation). The code allows for the subsurface test excavation of Aboriginal objects without the need for an AHIP. The code establishes the requirements for undertaking test excavation without an AHIP and establishes the requirements that must be followed when carrying out archaeological investigation in NSW where an application for an AHIP is likely to be made.

Additional amendments that commenced on 1 October 2010 include the introduction of new processes for Aboriginal Heritage Impact Permit (AHIP) applications, consultation guidelines to support the Aboriginal Heritage Impact Permits (AHIP) application process, and mechanical provisions such as the transfer and variations of conditions of AHIPs.

NSW Heritage Act 1977 and Heritage Amendment Acts 1998 & 2009

The purpose of these Acts is to ensure that the heritage of New South Wales is adequately identified and conserved. In practice the Acts have focused on items and places of non-indigenous heritage to avoid overlap with the NP&W Act, which has primary responsibilities for nature conservation and the protection of Aboriginal relics and places in NSW.

The *Heritage Amendment Act 1998* came into effect in April 1999. The Act instigated changes to the NSW heritage system, which were the result of a substantial review begun in 1992. A central feature of the amendments was the clarification and strengthening of shared responsibility for heritage management between local government authorities, responsible for items of local significance, and the NSW Heritage Council. The Council retained its consent powers for alterations to heritage items of State significance.

The *Heritage Amendment Act 2009* came into effect in October 2009. The Act includes greater fairness and rigour in the heritage listing process while retaining key elements of the current system, including local and State listings, and the Heritage Council.

One of the changes to the former Heritage Act has been the move from the arbitrary 50 year age-based definition for archaeology, to one based on significance where relics have to demonstrate local or State significance.

Under the *Heritage Act 1977* a 'relic' had been defined as any deposit which related to the European settlement of NSW and was 50 years old or more. This broad definition captured too many items – many of which would not generally be considered part of the State's archaeological heritage. This approach brings archaeological heritage management more



consistently within the management of other heritage items, which is based on an assessment of significance. The previous definition of archaeological relic encompassed a significant number of items over 50 years of age that had no heritage value.

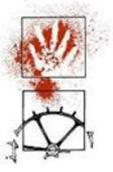
The Heritage Act is concerned with all aspects of conservation ranging from the most basic protection against damage and demolition, to restoration and enhancement. It recognises two levels of heritage significance – State and Local significance across a broad range of values.

Some key provisions of the Act are:

- The establishment and functions of the Heritage Council (Part 2);
- Interim heritage orders (Part 3), the State Heritage Register (Part 3A);
- Heritage Agreements (Part 3B);
- Environmental planning instruments (Part 5);
- The protection of archaeological deposits and relics (Part 6); and
- The establishment of Heritage and Conservation Registers for state government owned and managed items (Part 7).

Generally this Act provides protection to items that have been identified, assessed and listed on various registers including State government section 170 registers, local government Local Environmental Plans and the State Heritage Register. The Interim Heritage Order provisions allow the minister or his delegates (local government may have delegated authority) to provide emergency protection to threatened places which have not been previously identified.

In addition, the Act includes provisions which relate to the definition and protection of relics.



APPENDIX 6

SUBSURFACE TEST EXCAVATION METHODOLOGY



Subsurface Testing Field Program

Study Aims

A landscape based archaeological subsurface testing program should be undertaken in consultation with the RAPs, and conducted, prior to development impacts. Testing will include all landforms within the project area that will be directly impacted.

The aim: to ascertain the presence and archaeological significance of associated deposits.

Test Excavation Locations

This program is aimed to archaeologically test seven areas to determine the nature and extent of any subsurface archaeological deposit (Figure A3.1).

Each landform type in the project area will be tested. The landform types identified area:

- Spur line crest (high) (Test Location 1)
- Spur line crest (low) (Test Location 2)
- Saddle (Test Location 3)
- Saddle/drainage line (Test Location 4)
- Flats (Test Location 5)
- Hill slopes (Test Location 6)
- Jumping Creek (Test Location 7)

One test location is located within each landform.

Test Excavation Methodology

The test excavation will be undertaken in phases of testing (refer to Figures A3.2, 3 & 4 for indicative pit layouts).

Phase 1:

Test pits will be placed on two cross transects across the site at 10 metre intervals.

11 test pits will be completed at each location.

Phase 2 (optional – results dependant):

In the event that no artefacts are identified during the first phase of testing, additional pits will be placed at intermediary 5 metre intervals along the transects.

This comprised approximately 8 test pits.

Phase 3:

Additional test pits were placed on parallel transects at 10 metre intervals to test the broader site/landform location.

This comprised approximately 8 test pits.

Phase 4:

If artefacts were found during any of these phases then additional pits will be excavated around excavation points with one or more of the following characteristics:

- Diverse range of artefacts/materials;



- Evidence of in situ knapping;
- Low levels of disturbance;
- Stratified deposits;
- Other features indicative of substantial archaeological deposits.

Up to 12 50x50cm Code of Practice pits will be combined in any one test location to explore the distribution artefacts across the site – e.g. excavation will attempt to follow higher artefact numbers.

A similar approach may also be used to check apparent “zeros” by excavating trenches out from an area devoid of artefacts to explore whether or not the test pits have “missed” a node of artefacts or other archaeological deposits within the test area.

If zero artefacts are found in an area of the Test Excavation Area further testing in the form of a test trench, by joining a series of excavation pits may be excavated to test the “zero”. Additionally, if a density of artefacts is discovered then this “node” may also be further tested. See Figure 6 for examples of this.

Testing at each area may follow a combination of all of the above phases, or it may only comprise Phases 1, 3 and 4. Additionally, if artefact numbers appear to be increasing towards the margins of the area being tested, transects will be extended in an attempt to identify site boundaries.

In summary, excavation will proceed to a more intensive level of testing regardless of whether artefacts are found during the first phases of testing. This methodology is proposed as a means of not only testing the archaeological deposits at Jumping Creek, but also testing the methodology itself.

Following an on-site review, the test pit locations may be varied slightly in order to avoid the following:

- large stone cobbles or tors (with maximum linear dimensions greater than 300 mm);
- outcropping bedrock;
- highly disturbed or eroded ground; and/or
- substantial vegetation (with stem diameter of 100 mm or greater).

Hand Excavation

The test excavation program would be carried out in accordance with the Code of Practice (Part 6 *National Parks and Wildlife Act 1974*) Requirement 16a.

All pits would be excavated by hand using 0.5 x 0.5 metre units. An indicative testing methodology would consist of the following:

1. Mark out and record pit location(s).

The size of an individual testing point on a transect would be 1.00 x 0.50 metres (i.e. comprising two excavation units side by side).

However, additional test excavation units may be added to create a test trench comprising up to 12 excavation units (3m²) at any one testing point on a transect.



2. Excavate pit.

Pits would be excavated by shovel and trowel using standard by-hand archaeological methodologies including vertical and horizontal recording of spit levels and sedimentary, cultural and stratigraphic features.

The first excavation unit at each site would be excavated and documented in 5 cm spits. Depending upon the results of the first excavation unit, subsequent spit intervals would be at 10 cm, except in circumstances where the excavation of cultural features or stratigraphic units necessitates a smaller interval.

Excavation would cease according to an on-site appreciation of the vertical extent of the archaeological deposit.

3. Where cultural features are identified, such as heat treatment pits or hearths, detailed plans would be drawn and samples of dateable material would be obtained.
4. Other samples may be obtained for the potential analysis of paleoenvironmental indicators such as pollen, phytoliths and microfauna.
5. All excavated archaeological deposit would be dry sieved. All material would be sieved through 4 x 4 millimetre mesh, with use of a top larger mesh (10 x 10 mm) where appropriate. All identified or suspected cultural material recovered from sieving would be retained, bagged and labelled.
6. Sieving would be conducted over a tarpaulin, directly adjacent each excavation pit, and all excavated material would be transferred from the tarpaulin back to the excavation pit immediately upon completion of each excavated pit. This is to prevent injury to grazing animals.

Lithic Analysis

All lithic items would be examined in detail by a lithic specialist such as Dr Oliver McGregor (or other suitably qualified lithic specialist, depending on availability), using a low-power binocular microscope and incident illumination and/or hand lens. Descriptive recording of collected material would be to a level concomitant with the stated testing and salvage aims of the investigation, and the number of artefacts/type of material recovered.

The primary aim of the analysis of the lithic items retrieved from the test locations would be to assist in the assessment of the significance of the sites/deposits and to identify appropriate management strategies.

Raw material type would be recorded for each stone artefact. Attributes for each artefact in the assemblage would be entered into a relational database and digital photographs may be taken of selected artefacts, where appropriate. Information for each specimen recorded in the analysis would be provided in an appendix in the final report.

Analysis will be consistent with standards and guidelines defined by OEH.

Protocol to be followed if suspected human remains are encountered

In the event that suspected human remains are encountered during any of the proposed test or salvage excavations, protocols for the unanticipated discovery of archaeological material and suspected human remains (presented in Attachment 1) would be adopted.

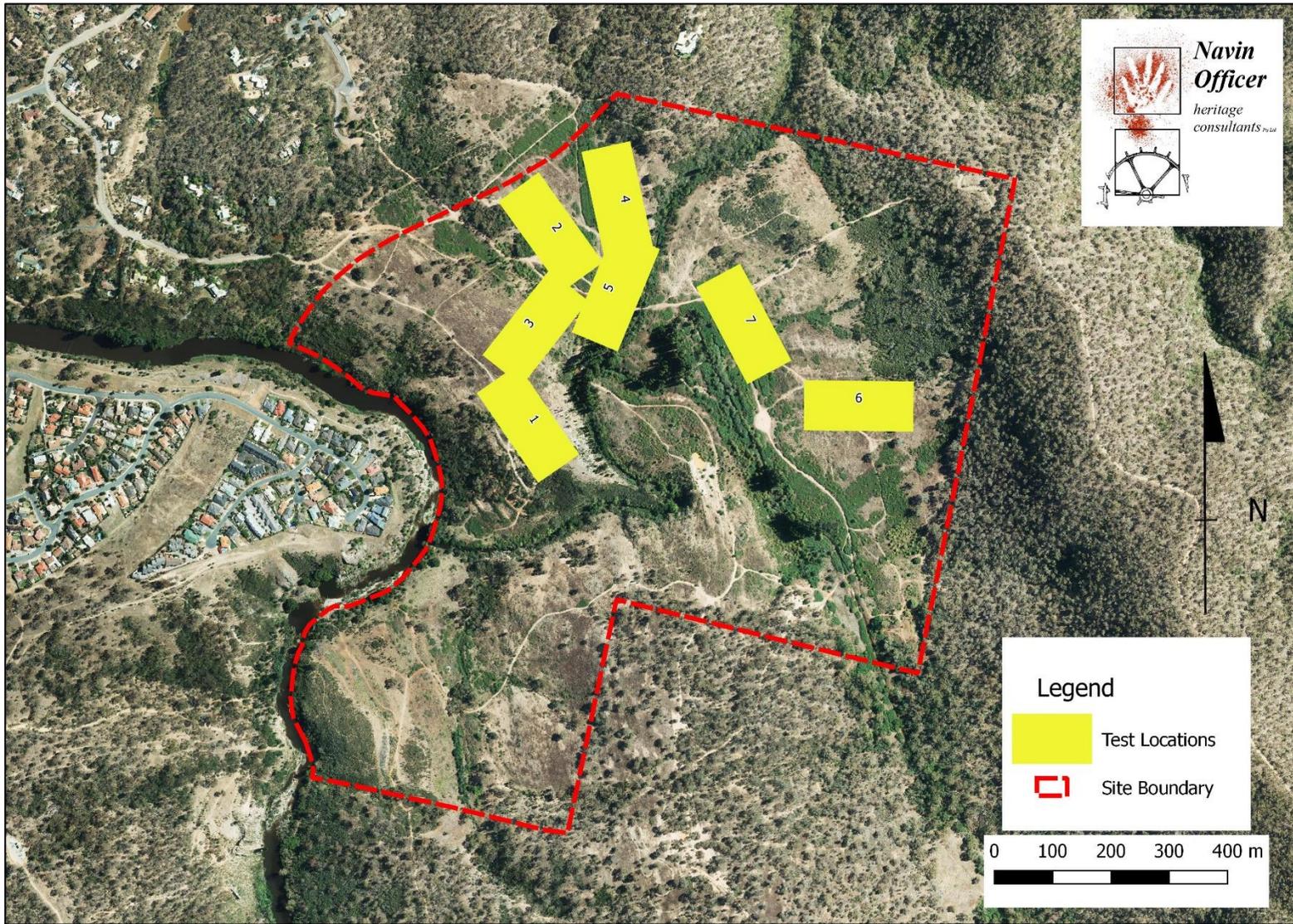
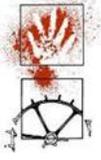


Figure A3.1 Location of proposed Test locations

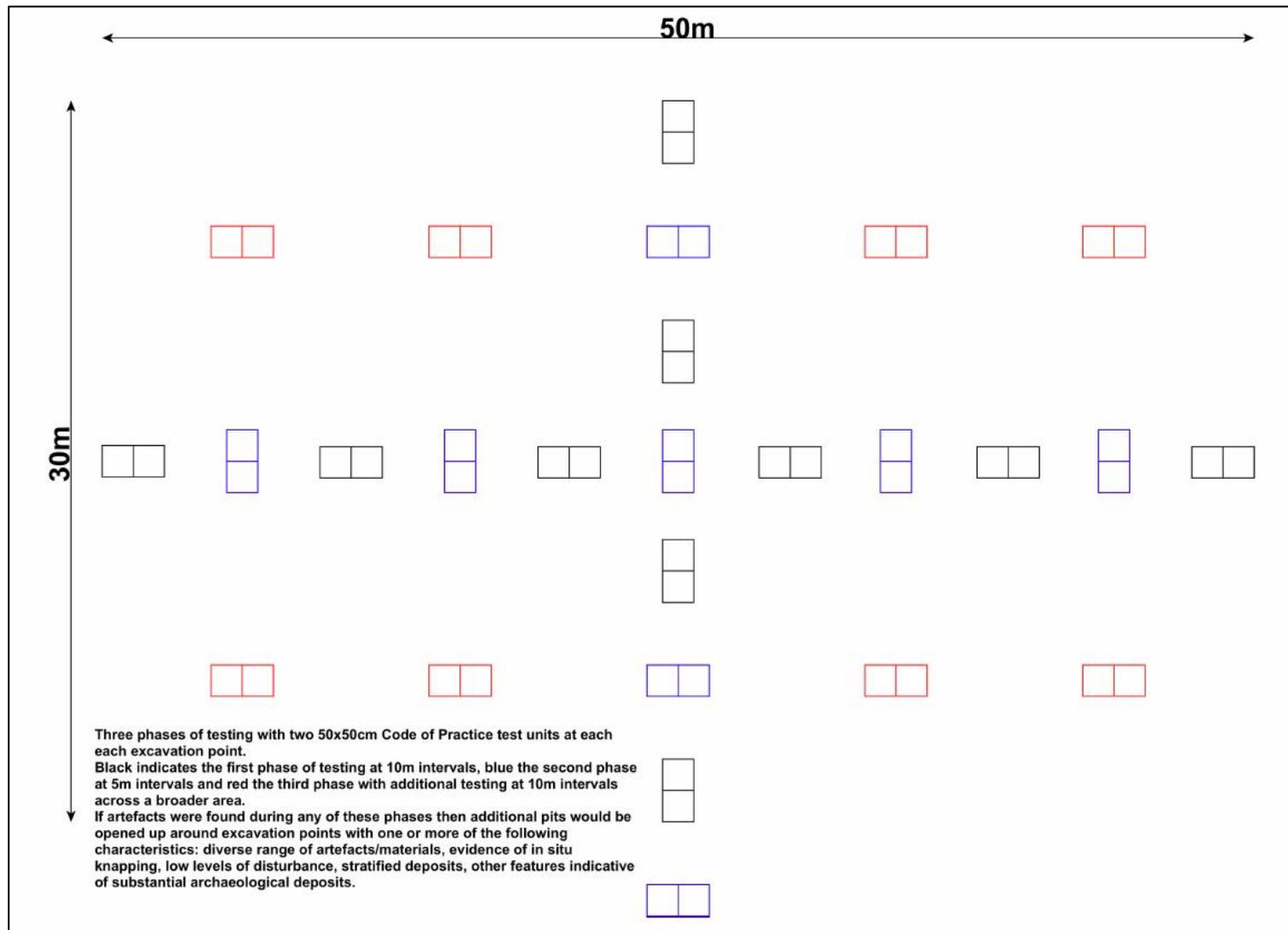


Figure A3.2 Basic Test pit layout if no artefacts are found

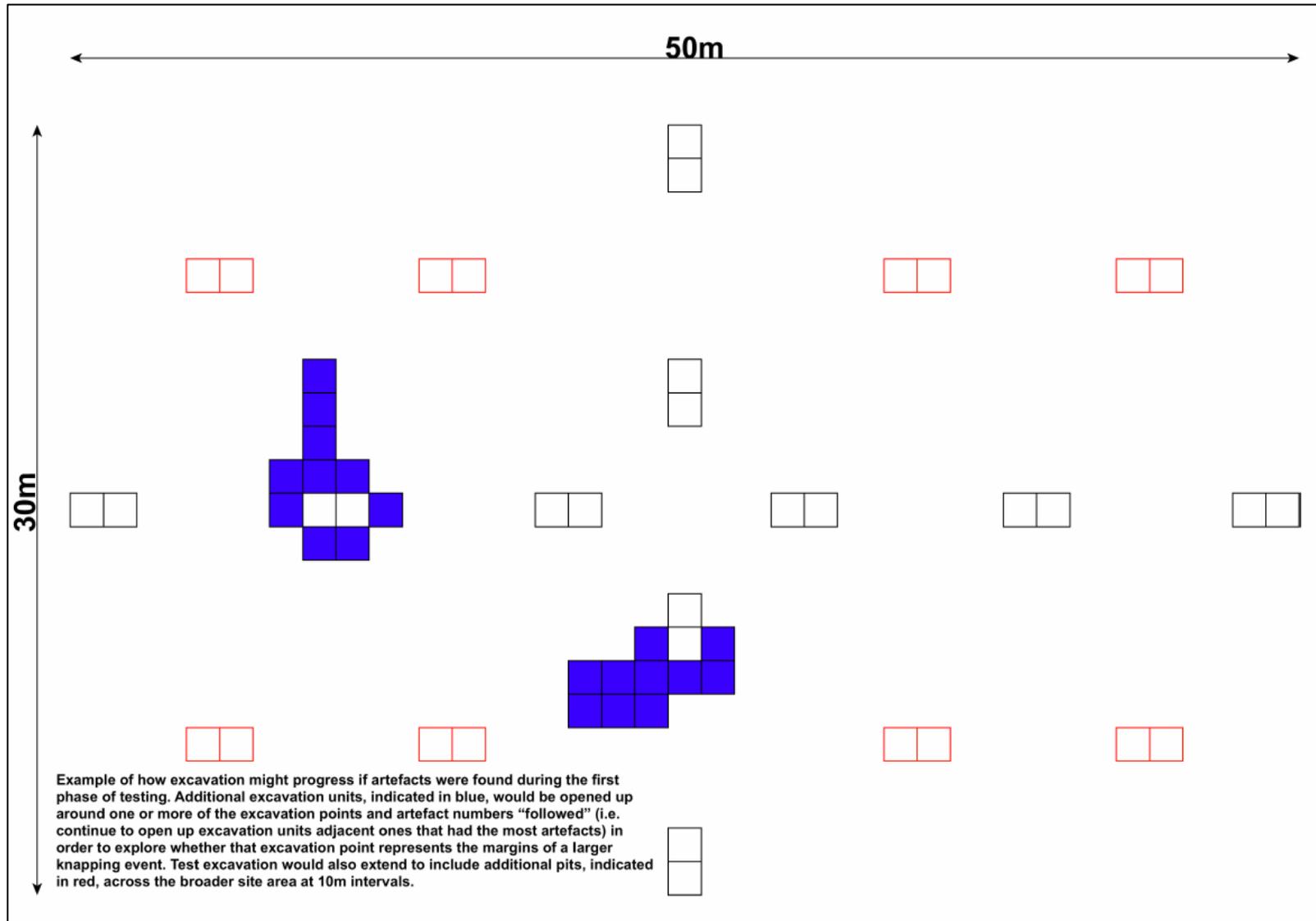
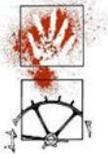


Figure A3.3 Basic Test pit layout if artefacts are found during Phase 1

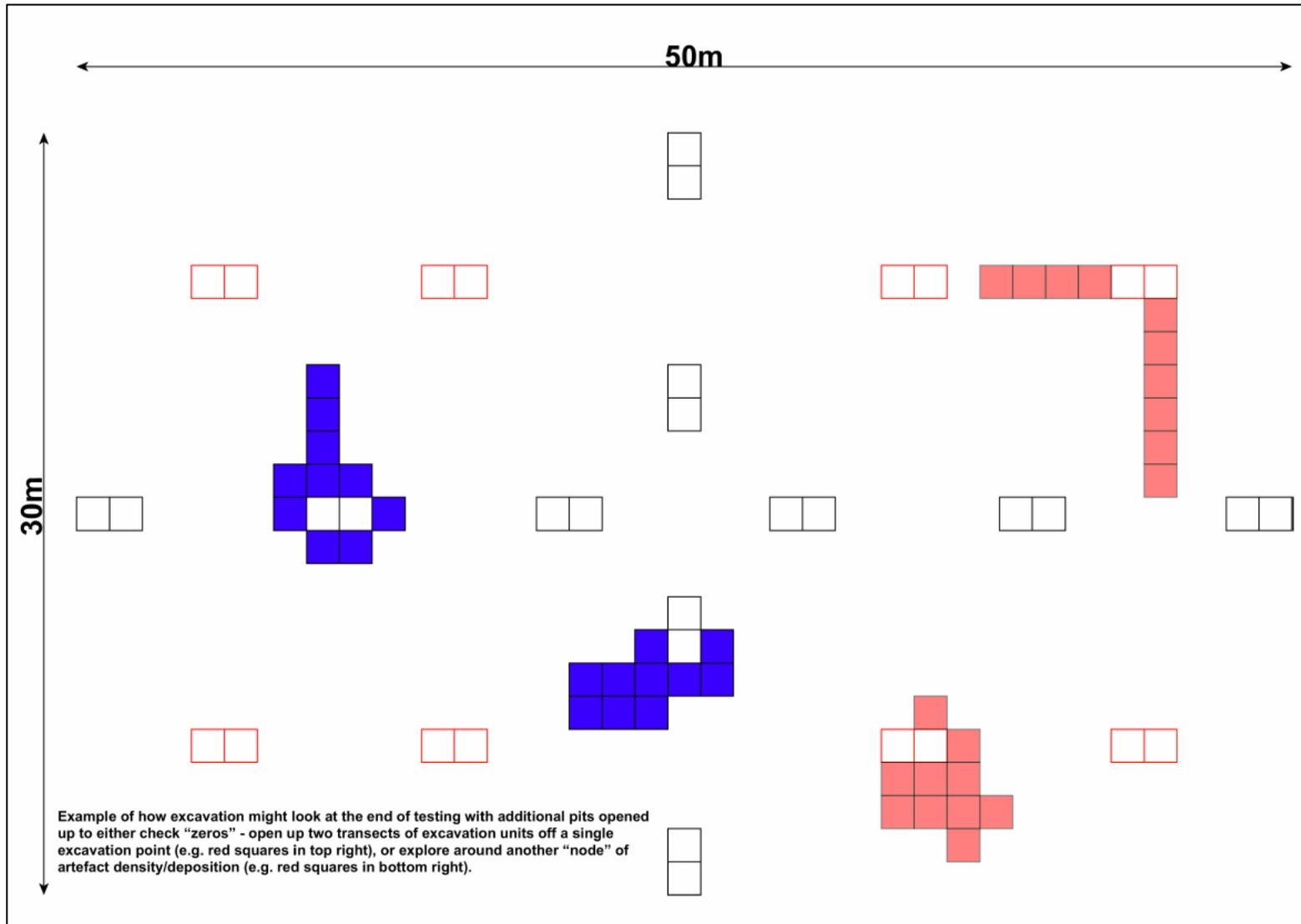
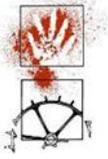


Figure A3.4 Basic Test pit layout if artefacts are found and additional pits opened up to check any “zero” locations



Environmental Safeguards

Minimal vegetation would be removed to facilitate the testing program.

Dry sieving methods would be adopted as a means to minimise possible erosion caused by wet sieving and in order to reduce vehicle movements.

All pits would be backfilled as soon as practicable after completion of test excavation using material that is excavated from the pits to prevent possible sediment contamination from backfilling with introduced soil.

Care and Management of Recovered Artefacts

Disposition and storage of collected stone artefact assemblages during this test excavation would be dealt with in accordance with the Code of Practice (Part 6 *National Parks and Wildlife Act 1974*) under Requirement 26.

After examination and measurement, all recovered artefacts would be stored individually in standard resealable plastic bags or bagged in appropriate and identifiable units. The bags would be labelled using a permanent black pen with the item's unique identification number (where generated and appropriate), and/or details of its provenance within the excavation (as appropriate).

Following completion of the analysis of the recovered artefacts, it is proposed that all Aboriginal objects be repositioned back into the landscape ('returned to country') in accordance with Requirement 26 of the Code of Practice.

All locations of repositioned artefacts would be recorded on appropriate OEH forms and lodged with the AHIMS, administered by OEH.

Registered Aboriginal Party Participation in Field Work

The proponent is committed to providing an opportunity to the representatives of registered Aboriginal parties to participate in the conduct of field survey program.

RAP Field Representative Selection Protocol

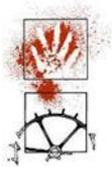
It is proposed that each registered Aboriginal party which seeks to participate in the field program, submit an application to Navin Officer Heritage Consultants, demonstrating experience and field qualifications. The selection of field participants would be made by the proponent. Representation would be limited to one person per successful registered party application.

The test excavation program would take approximately one week to complete using one team that would comprise:

- One primary archaeologist (from Navin Officer Heritage Consultants (NOHC)).
- Three assisting archaeologists/field assistants (from NOHC).
- Four Aboriginal Site Officers.

Report preparation

Information gained in the course of the survey and information provided by the Aboriginal community will be documented in a report (except where information has been identified as culturally sensitive and therefore restricted). The report will detail the survey methodology, results, archaeological test excavation methodology and results and assessment of significance of identified sites. Recommendations will be provided for the management of sites.



APPENDIX 7

UNANTICIPATED DISCOVERY PROTOCOLS



Protocol to follow in the event that Aboriginal object(s) or historical relics (other than human remains) are encountered and no AHIP has been approved

In the event that object(s) which are suspected of being Aboriginal object(s) or relic(s) are encountered during development works, then the following protocol will be followed:

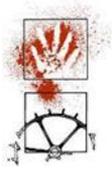
1. Cease any further excavation or ground disturbance, in the area of the find(s);
 - a. The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be temporarily halted; and
 - b. The site supervisor and the Principal will be informed of the find(s).
2. Do not remove any find(s) or unnecessarily disturb the area of the find(s);
3. Ensure that the area of the find(s) is adequately marked as a no-go area for machinery or further disturbance, and that the potential for accidental impact is avoided;
4. Note the location and nature of the finds, and report the find to:
 - a. Relevant project personnel responsible for project and construction direction and management, and
 - b. Report the find to the Office of Environment and Heritage (OEH).
5. Where feasible, ensure that any excavation remains open so that the finds can be recorded and verified. An excavation may be backfilled if this is necessary to comply with work safety requirements, and where this action has been approved by the OEH. An excavation that remains open should only be left unattended if it is safe and adequate protective fencing is installed around it.
6. Following consultation with the relevant statutory authority (OEH), and, where advised, any other relevant stakeholder groups, the significance of the finds should be assessed and an appropriate management strategy followed. Depending on project resources and the nature of the find(s), this process may require input from a consulting heritage specialist.
7. Development works in the area of the find(s) may re-commence, if and when outlined by the management strategy, developed in consultation with, and approved by the relevant statutory authority.
8. If human skeletal material is encountered, the protocol for the discovery of human remains should be followed (refer attached).



Protocol to follow in the event of the discovery of suspected human remains

The following protocol will be actioned if suspected human material is revealed during development activities or excavations:

1. All works must halt in the immediate area of the find(s) and any further disturbance to the area of the find(s) prevented.
 - c. The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted; and
 - d. The site supervisor and the Principal/Project manager will be informed of the find(s).
2. If there is substantial doubt regarding a human origin for the remains, then consider if it is possible to gain a qualified opinion within a short period of time. If feasible, gain a qualified opinion (this can circumvent proceeding further along the protocol for remains which are not human). If conducted, this opinion must be gained without further disturbance to the find(s) or the immediate area of the find(s). (Be aware that the site may be considered a crime scene that retains forensic evidence). If a quick opinion cannot be gained, or the identification is positive, then proceed to the next step.
3. Immediately notify the following of the discovery:
 - a. The local Police (this is required by law);
 - b. A OEH archaeologist or Aboriginal Heritage Officer NSW OEH;
 - c. Representative(s) from the Local Aboriginal Land Council; and
 - d. The project archaeologist (if not already notified).
4. Co-operate and be advised by the Police and/or coroner with regard to further actions and requirements concerning the find area. If required, facilitate the definitive identification of the material by a qualified person (if not already completed).
5. In the event that the Police or coroner instigate an investigation, construction works are not to resume in the designated area until approval in writing is gained from the NSW Police.
6. In the event that the Police and/or Coroner advise that they do not have a continuing or statutory role in the management of the finds then proceed with the following steps:
7. If the finds are not human in origin but are considered to be archaeological material relating to Aboriginal occupation then proceed with Protocol for the discovery of Aboriginal objects (other than human remains).
8. If the finds are Aboriginal or probably Aboriginal in origin:
 - a. Ascertain the requirements of OEH, the Heritage Branch, the Project Manager, and the views of the AFG, and the project archaeologist.
 - b. Based on the above, determine and conduct an appropriate course of action. Possible strategies could include one or more of the following:
 - i. Avoiding further disturbance to the find and conserving the remains *in situ*;
 - ii. Conducting archaeological salvage of the finds following receipt of any required statutory approvals;



- iii. Scientific description (including excavation where necessary), and possibly also analysis of the remains prior to reburial;
 - iv. Recovering samples for dating and other analyses; and/or
 - v. Subsequent reburial at another place and in an appropriate manner determined by the AFG.
9. If the finds are non-Aboriginal in origin:
- c. Ascertain the requirements of the Heritage Branch, Project Manager, and the views of any relevant community stakeholders and the project archaeologist.
 - a. Based on the above, determine and conduct an appropriate course of action. Possible strategies could include one or more of the following:
 - a. Avoiding further disturbance to the find and conserving the remains *in situ*;
 - b. Conducting archaeological salvage of the finds following receipt of any required statutory approvals;
 - c. Scientific description (including excavation where necessary), and possibly also analysis of the remains prior to reburial;
 - d. Recovering samples for dating and other analyses; and/or
 - e. Subsequent reburial at another place and in an appropriate manner determined in consultation with the Heritage Office and other relevant stakeholders.
10. Construction related works in the area of the remains (designated area) may not resume until the proponent receives written approval in writing from the relevant statutory authority: from the Police or Coroner in the event of an investigation, from OEH in the case of Aboriginal remains outside of the jurisdiction of the Police or Coroner, and from the Heritage Branch in the case of non-Aboriginal remains outside of the jurisdiction of the Police or Coroner.