



CULTURAL
HERITAGE
MANAGEMENT
AUSTRALIA

Archaeological Assessment of the
Proposed Ellerton Drive Extension,
Queanbeyan.

AUTHORS NAME : Dr Sophie Collins
PO Pox 9463, Deakin, ACT 2600

CLIENT NAME: Queanbeyan City Council
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Table of Contents

	Page
Executive Summary	1
1.0 Introduction	8
1.1 Development Proposal	8
1.2 Aims of Investigation	8
1.3 Limitations of the Investigation	9
1.4 Project Methodology	9
1.5 Effective Survey Coverage	12
2.0 Environmental Context of the Study Area	14
2.1 Topography	15
2.2 Geology	16
2.3 Vegetation	17
2.4 Climate	17
2.5 Current Land Use	17
3.0 Aboriginal Community Consultation	18
3.1 Initial Consultation	18
3.2 Fieldwork Participation and Consultation	19
3.3 Post Fieldwork Consultation	20
4.0 Aboriginal Archaeological Context	21
4.1 Heritage Register Searches and Previously Recorded Sites	21
4.2 Limitations to Heritage Site Searches	22
4.3 Previous Investigations in the Current Study Area	32
4.3.1 Regional Overview	22
4.3.2 Research in the Queanbeyan Area	23
4.3.3 Previous Investigations in the Current Study Area	35
4.4 Local Aboriginal Culture – Ethnohistorical Evidence	38
4.4.1 Ethnohistoric Overview	39
4.4.2 Environmental Determinants of Social Organisation	40
4.4.3 Aspects of Aboriginal Social Organisation	42
4.4.4 Concepts of Aboriginal Land Ownership	43
4.4.5 Ethnohistorical Information for the Queanbeyan Region	44
4.5 Predictive Occupation Model	46
4.5.1 Predictive Models: Strengths and Weaknesses	46
4.5.2 A Predictive Model of Site Type Distribution for the Study Area	47

5.0	European Historical Background	51
5.1	Historical Context	51
5.1.1	Exploration and Pioneers	51
5.1.2	Development of the Queanbeyan Town	51
5.1.3	Mining	52
5.1.4	Lime Burning	53
5.1.5	The Jumping Creek Area	54
5.2	Search of the Heritage Registers	55
5.3	Previous Historical Surveys	55
5.3.1	Curtis Land and Environs	56
5.3.2	Jumping Creek Area	56
5.3.3	Gale Precinct	62
5.4	Predictive Statements	63
6.0	Results	64
6.1	Aboriginal Heritage	64
6.1.1	Summary of Results	64
6.1.2	Previously Recorded Sites	64
6.1.3	Newly Identified Sites	72
6.1.4	Discussion	82
6.2	Historic Heritage	86
7.0	Cultural Heritage Values and Statement of Significance	87
7.1	Assessment Guidelines	87
7.2	The Burra Charter	87
7.3	Significance Criteria	88
7.4	Scientific (Archaeological) Significance of Aboriginal Sites Identified in the Study Area	90
8.0	Statutory Obligations	93
8.1	Commonwealth Legislation	93
8.2	State Legislation	95
8.3	Local Legislation	103
9.0	Potential Impacts	105
9.1	Proposed Activity	105
9.2	Type of Harm	105
10.0	Avoiding and/or Minimising Harm	107
	References Cited	109

APPENDIX A	- Copy of Letter Sent out by CHMA requesting lists of Aboriginal people/groups known to possess cultural knowledge of Queanbeyan.	116
APPENDIX B	- Responses provided by requests sent in Appendix A	117
APPENDIX C	- Newspaper Advertisements requesting expressions of interest from Aboriginal parties holding cultural knowledge of the Queanbeyan area	119
APPENDIX D	- Expressions of interest received from Aboriginal groups	122
APPENDIX E	- Copy of letter of employment sent to all five registered Aboriginal groups	127
APPENDIX F	- Results of AHIMs Site search provided by OEH	128
APPENDIX G	- Response to Request for Native Title Searches	132
APPENDIX H	- Site Cards for new sites found during the present Investigation	134
APPENDIX I	- Written responses to CHMAs report provided by the Aboriginal Community	150

Tables and Figures

List of Figures

Figure 1. Proposed route for the Ellerton Dr extension. Map provided by the Queanbeyan City Council.	6
Figure 2. Location of the study area within the broader region	7
Figure 3. Maps locations of the three divisions discussed in this report.	12
Figure 4. Shows previously recorded Aboriginal sites within the northern portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.	24
Figure 5. Shows previously recorded Aboriginal sites within the Jumping Creek and Environs portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.	25
Figure 6. Shows previously recorded Aboriginal sites within the southwest portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.	26
Figure 7. Location of previously recorded historic sites in and around Jumping Creek and Environs and Gale Precinct	56

Figure 8. The location of newly recorded sites from the current investigation.	65
Figure 9. Locations of Sites 57-2-351 and 57-2-352 – previously recorded locality is provided in red, the newly recorded location is in turquoise	71
Figure 10. Locations of previous and newly recorded sites within the impact area for the road corridor, showing site clustering on the end of the crest of a gentle ridge.	84
Figure 11. Topographic map pieced together from Topoview Raster 2006 (Department of Lands). Study area crosses into four 1:250,000 maps – from top left in a clockwise direction: Canberra 87273N, Bungendore 87272N, Hoskinstown 87272S and Tuggeranong 87273S.	85

List of Tables

Table 1. Estimated Survey Coverage, Surface Visibility and Effective Survey Coverage	13
Table 2. History and details of previously recorded sites within 100m of the proposed Ellerton Drive Extension	27
Table 3. Previously recorded Historic Sites around Jumping Creek and Environs	58
Table 4. Previously recorded historic sites in the Gale Precinct	62
Table 5. Artefact assemblage identified at Site 57-2-635	69
Table 6. Artefact assemblage identified at Site 57-2-351 and 352.	71
Table 7. Artefact assemblage identified at ED1.	73
Table 8. Artefact details from ED2	75
Table 9. Artefact assemblage identified at ED3.	77
Table 10. Details of artefact identified at ED4.	78
Table 11. Details of artefact identified at ED5.	80
Table 12. Details of artefact identified at ED6.	81
Table 13. Significance assessment for Aboriginal heritage sites occurring within the study area.	90
Table 14. Summary of Potential Impacts	105

Plates

Plate 1. Ground cover away from tracks at 57-2-635.	67
Plate 2. Looking east along site to relocation point 57-2-683	67
Plate 3. Looking north to ridge crest from northern extremity of site	68

Plate 4. Sample of artefacts identified	68
Plate 5. Sample of artefacts identified	68
Plate 6. Looking west to Greenleigh development from 57-2-351.	70
Plate 7. Anvil stone comprising Site 57-2-351.	70
Plate 8. Looking north to Ellerton Dr from Sites 351/352	70
Plate 9. Looking south to 57-2-352 beneath power lines	70
Plate 10. Artefacts identified at site 57-2-352	70
Plate 11. Looking south from western extremity along track	73
Plate 12. Low visibility in adjacent grassed areas	73
Plate 13. Sample of artefacts identified at ED1.	73
Plate 14. View north from ED2 along vehicle track	75
Plate 15. View south from ED2	75
Plate 16. Manuport ED2.	75
Plate 17. Looking east to Queanbeyan Rv from ED3	76
Plate 18. Looking west up mound of ED3 with Carl Brown.	76
Plate 19. Artefacts identified at ED3	76
Plate 20. Looking north to creek line at ED4	78
Plate 21. Looking south up hill to 57-2-635 from ED4	78
Plate 22. Artefact at ED4.	78
Plate 23. Looking east up erosion scald to ridge crest	79
Plate 24. Looking west down erosion scald	79
Plate 25. Artefacts identified at ED5	79
Plate 26. Looking south along ED6	81
Plate 27. Looking north along ED6	81
Plates 28 and 29 Artefacts identified at ED6	81
Plate 30. Artefacts identified at ED6	81

Executive Summary

Project Area and Description

This archaeological heritage assessment has been prepared by Cultural Heritage Management Australia for the Queanbeyan City Council. The Queanbeyan City Council is seeking development approvals to extend the existing portion of Ellerton Dr, Queanbeyan to the south and west to provide a link to the new Edwin Land Parkway intersection at Old Cooma Road, Queanbeyan.

The proposed impact area is discrete, linear and relatively narrow, extending approximately 4.6km in length and with a width of approximately 80m. The proposed development is located in eastern Queanbeyan within the Queanbeyan City Council local government area.

Aims of the Investigation

The primary aims of this assessment were to identify and record any evidence of Aboriginal or historic cultural heritage or cultural values within the proposed development area, to assess the significance of this material, to determine the potential impacts of the proposed activity upon any heritage sites in the area and to establish appropriate recommendations for the conservation and management of this evidence, in consultation with the Aboriginal community.

Project Methodology

The investigation process began with an intensive background study including the archaeological, historic and environmental background of the area. This was followed by consultation with the Aboriginal community and a field survey conducted with the assistance of 5 representatives of the registered Aboriginal parties, in accordance with the requirements of the Office of Environment and Heritage (OEH) (in the Department of Premier and Cabinet, formerly the Department of Environment, Climate Change and Water).

The current assessment has been conducted in accordance with the OEH *Guide to Investigating Assessing and Reporting on Cultural Heritage in NSW* (2011a), and *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010), along with consultation with the Aboriginal community as per the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 policy* (DECCW 2010).

A field inspection was undertaken on the 2nd August 2012 and included representatives of the 5 registered Aboriginal parties; Buru Ngunawal Aboriginal Corporation, Ngambri Local Aboriginal Land Council, Ngunawal Aboriginal Heritage Corporation, King Brown Tribal Group and the Ngunawal Elders Council.

The survey involved walking the length of the proposed route as a single transect with the field team separated out at a distance of approximately 20m. Any areas of exposure/good visibility near the study area were also targeted. The total survey coverage (ground physically inspected for heritage sites) is therefore considered to be 100%. Allowing for the effects of dense grass and vegetation cover, the total effective survey coverage (i.e. the visible ground surface physically inspected) equated to just less than 1% of the study area.

Investigation Results and Significance Assessments

Eight Aboriginal heritage sites had been previously identified within 100m of the proposed centerline of the road corridor (sites 57-2-66/428, 57-2-74, 57-2-75 and 57-2-615, 57-2-635, 57-2-352, 57-2-352). These comprised 7 open artefact scatters and an isolated find. Due to increased ground cover since the original identification of these sites, four sites could not be relocated during the current investigations (sites 57-2-66/428, 57-2-74, 57-2-75 and 57-2-615). The remaining 3 sites were relocated and their current status was re-recorded (sites 57-2-635, 57-2-352, 57-2-352). A further 6 sites were identified during the present study, including 4 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).

The registered Aboriginal parties did not disclose any specific knowledge of traditional values/places within the current study area, however all parties emphasized the importance of Aboriginal sites and stone artefacts generally to traditional Aboriginal culture and to the broader community.

No previously identified historic/European sites occurred within the study area. No new historic sites were identified during the present investigations.

The predictive model indicated that for much of the investigation area, Aboriginal occupation would have generally been of low intensity. The areas around Jumping Creek and Environs are an exception to this, where the landforms present and proximity to permanent water sources lend themselves to more intensive occupation. Stone artefact evidence was identified throughout the study area and confirmed the site location predictions made in the predictive model. The lack of soil depth throughout the area prohibits the development of deposits of any depth with all identified sites able to be surface expressions only. The potential for further stone artefact evidence to occur throughout the study area is defined as follows:

- The northern portion of the route cuts through the steeply inclined ridges of Curtis Land, which is dissected by drainage lines that would have been cold and damp and unappealing for habitation. No sites were identified along this section of the route and it is assessed as being of very low archaeological potential.

- It is likely that further open artefact scatters occur beneath the vegetation and grass cover in those sections of the route that pass through the area around Jumping Creek. These areas are assessed as being of moderate archaeological sensitivity.

Other types of heritage sites are not anticipated to occur within the study area, with a very low to negligible potential for sites such as rock shelters, scarred trees, quarries and burials. Other traditional or historical Aboriginal values have not been identified during the present or any previous investigations of the area.

Sites 57-2-351, 57-2-352, ED1, ED2, ED3 and ED6 are assessed as being of low scientific significance and having low conservation values on the grounds that these sites show the same range of raw materials and artefact classes as have been identified elsewhere in the region. These sites do not represent rare or unusual examples. Further, each of these sites has been affected by various post-depositional processes and are consequently of relatively low integrity. None of these sites retain any potential for sub-surface deposits that may be of high research value.

Sites 57-2-66/428, 57-2-74, 57-2-75, 57-2-635, ED4 and ED5 are identified as forming a single large open artefact scatter extending across a broad ridge crest. This site is assessed as being of low-medium scientific significance and having a moderate conservation value. The site shows the same range of raw materials and artefact classes as have been identified elsewhere in the region, however its size is relatively unusual in the area. The potential also exists for the site to be much larger than what is currently visible. The site has been affected by various post-depositional processes and is consequently of relatively low integrity. There is no potential for sub-surface deposits that may be of a high research value. This site was specifically identified as holding strong cultural value to the Aboriginal community.

Potential Impacts

The impact area of the Proposal comprises a linear 4.6km with an approximate width of 80m and average depth of 600mm. It is anticipated that the original landscape along the route of the road will be completely destroyed within the 80m wide corridor. The sites identified during the current investigation range between 1m and 88m from the proposed centerline of the road corridor. As such, Aboriginal sites identified during the current investigation may be subject to varying level of harm.

Sites 57-2-351/352, ED3 and ED6 lie within the impact zone of the proposed development and will therefore be subject to direct harm by the proposed works. This will result in a total loss of cultural values. Site 57-2-66/428/74/75/635/ED4/ED5 occurs immediately within the impact zone but also extends another 150m to the east of the development. As such, approximately 40m of the site will be subject to direct harm, while a further 20m

beyond the bounds of the impact area will be vulnerable to indirect/inadvertent harm through general construction activities and vehicle movement. These activities will therefore result in a partial loss of site value. Sites ED1 and ED2 occur in excess of 70m from the proposed centerline of the road corridor, as such, they may be vulnerable to inadvertent harm through general construction activities and vehicle movement, which would result in a partial loss of site value.

Overall, it is assessed that provided the impacts are confined to the 80m corridor identified by the QCC, the overall impacts of the proposal on Aboriginal heritage will be low within a local context and very low within a regional context. However, mitigation measures can also be implemented to further reduce impacts to the sites identified within the impact zone and immediate surrounds.

Avoiding and/or Minimising Harm

The following recommendations are made on the basis of legal requirements under the NP&W Act and the EP&A Act, the results of the investigation and consultation with the registered Aboriginal parties. Due to a number of developmental constraints, the Queanbeyan City Council has advised that avoidance of sites will not be possible in the current development. The following recommendations are made with this in mind:

- 1) Given that impacts cannot be avoided to identified sites, prior to any impacts occurring the proponent must obtain from the OEH a S90 Aboriginal Heritage Impact Permit (AHIP) for this evidence, in consultation with the registered Aboriginal parties. The AHIP should be obtained over the entire impact area to address s86(2) requirements of the NP&W Act and the mitigation measures detailed below. As a condition of the AHIP the registered Aboriginal representatives and a qualified archaeologists should be engaged to:
 - a) Site 57-2-66/428/74/75/635/ED4/ED5
 - a. Identify and mark the external boundary of the impact area at Site with a 5m buffer clearly marked on the ground;
 - b. Salvage any artefacts that might be subject to impacts, including those identified along vehicle tracks that may be used in construction activities;
 - c. Salvaged artefacts should be subject to detailed recording and analysis;
 - d. Relocate salvaged artefacts to site 57-2-683 where previously salvaged artefacts are already located.
 - e. Identify boundaries of remainder of the site, and protect with barrier markers to ensure no indirect or inadvertent harm to the remaining portion of the site.
 - f. Site boundaries must be removed with development works conclude.

- b) Sites 57-2-352/352, ED3 and ED6
 - a. Salvage any artefacts that might be subject to impacts, including those identified along vehicle tracks that may be used in construction activities;
 - b. Salvaged artefacts should be subject to detailed recording and analysis;
 - c. Relocate salvaged artefacts to suitable location nearby but out of area of impact.
- c) Sites ED1 and ED2
 - a. Boundaries of each site should be identified and marked on the ground with protective barriers to ensure no indirect or inadvertent harm comes to the sites.
 - b. A buffer of at least 10m is recommended to allow for probability that the sites extend further across the landform than is visible in current areas of exposure.
 - c. Protective barriers to be removed on conclusion of works.
- 2) All salvage work must be undertaken prior to any development impacts occurring. Archaeological investigations must only be undertaken by qualified archaeologists in accordance with the requirements of s1.6 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW, and in consultation with the registered Aboriginal parties.
- 3) Relocation points for salvaged artefacts must be lodged with the OEH for inclusion in AHIMS.
- 4) In accordance with the request of the Aboriginal Community (see Appendix I), site inductions should include a cultural awareness element in which it is clearly stated that all vehicular travel must be limited to within the surveyed easement to minimize risks of impacting sites outside the easement and outlines the OEH penalties that can be imposed for knowingly or unknowingly impacting heritage sites.



Figure 1. Proposed route for the Ellerton Dr extension. Map provided by the Queanbeyan City Council.



Figure 2. Location of the study area within the broader region.

1.0 Introduction

Queanbeyan City Council is seeking development approval for the construction of an extension to Ellerton Drive, Queanbeyan. The extension will provide a link between East Queanbeyan at the current termination point of the existing Ellerton Dr and Karabar at Old Cooma Rd (see Figures 1 and 2). CHMA have been engaged to undertake a complete archaeological heritage assessment including both Aboriginal and historical resources for the proposed road corridor.

1.1 Development Proposal

The current development proposal for the extension of Ellerton Drive has been deemed necessary by Queanbeyan's Transport Plan (The Googong and Tralee Traffic Study 2031) by providing an important link in the regional transport. The traffic study found that without this extension, traffic at Cooma Street and Queens Bridge will be untenable (Queanbeyan City Council 2012)..

The total length of the road is approximately 4.6km and is anticipated to be a single carriageway with provision for cyclists. The road alignment follows that provided in figure 1, on which the centerline is marked. The width of the road corridor will be 80m (40m either side of the centerline) (Queanbeyan City Council 2012).

The proposed route transects a range of terrain from gentle sloped land that has been subject to extensive clearance, through to relatively untouched bush extending up steep hillsides.

The proposed development is to be assessed under a Part 5 Environmental Assessment under the EP&A Act 1979 (Queanbeyan City Council 2012).

1.2 Aims of the Investigation

This investigation aims to assess the Aboriginal and European cultural heritage values within the study area through:

- Assessment of previous archaeological research in the region;
- Community consultation with relevant Aboriginal communities/stakeholders and the Queanbeyan branch of the Office of Environment and Heritage;
- Detailed field survey across the study area involving members of the Aboriginal community with an interest in the current study area.

The specific objective of this assessment is to establish the nature of any potential impacts to heritage sites caused by the proposed development and to determine the need, or otherwise, for an Aboriginal Heritage Impact Permit.

1.3 Limitations of the Investigation

All archaeological fieldwork is subject to limitations that may affect the reliability of the results. This problem encountered the following limiting factors:

- Prior disturbance:
- Surface visibility: surface visibility was extremely poor across the entire site. Low surface visibility greatly reduces the potential for the survey team to identify some types of archaeological sites. This is further discussed in section 1.5 below.

1.4 Project Methodology

A three-stage project methodology was implemented for this assessment.

Stage 1 (Pre-Fieldwork Background)

Prior to fieldwork being undertaken, the following tasks were completed.

The collation of relevant documentation for the Project

The following background searches were carried out and documentation collated for this project.

- A site search was ordered of the Aboriginal Heritage Information Management System on 21st June 2012.
- Several days of archaeological and historical background research were undertaken with the aid of Jackie Taylor at the Queanbeyan office of OEH, examining relevant reports documenting the outcomes of previous heritage studies in the vicinity of the study area;
- references to the land use history of the study area.
- 1:25 000 maps of the study area;

Aboriginal Consultation

All Aboriginal consultation was undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010a). Prior to undertaking fieldwork, identified potentially interested parties were contacted and informed of the details of the current investigation. The entire consultation processes is detailed in full in section 3.

As part of an ongoing consultation process, all aspects of the project were discussed with the groups, including the findings of the fieldwork, and the proposed management recommendations for the study area. A copy of this report and its recommendations was also provided to everyone who registered an interest in the development.

Stage 2 (Field work)

The field survey was conducted on the 2nd August 2012. The survey team included:

- Wally Bell – Buru Ngunawal Aboriginal Corporation
- Geoffrey Murray – Ngambri Local Aboriginal Land Council

- Graeme Dobson – Ngunawal Aboriginal Heritage Corporation
- Carl Brown – King Brown Tribal Group
- Arnold Williams – Ngunawal Elders Council
- Ms Eli Ramsland – Contracts Engineer – Queanbeyan City Council
- Dr Sophie Collins, CHMA archaeologist

A survey methodology was employed to provide maximum survey coverage across the study area (see section 1.5 below). Areas of high surface visibility were targeted for detailed inspection. A single transect was walked along the entire length of the proposed route. The field team was separated at a distance of approximately 30m providing a 140m wide sweep of the 100m wide corridor. Any sites located just outside the current with the potential to be indirectly impacted by machinery/vehicles or lay down areas have therefore also been identified.

Locations were recorded using a hand held Garmin GPS unit set to the Geocentric Datum of Australia (GDA 94). The results of the field survey were discussed by the survey team at the end of the survey and management options were considered.

Stage 3 - Reporting

Stage 3 involved compilation of a report detailing the fieldwork results and management recommendations. This document represents the heritage assessment for the proposed Ellerton Dr Extension. This report was produced by Dr Sophie Collins, with special thanks to Jackie Taylor of the OEH for her exceptional and unending assistance.

1.5 Effective Survey Coverage

Survey coverage refers to the estimated proportion of the study area that has actually been visually inspected as part of the field survey. For the purpose of this assessment, it is estimated that an individual member of a field team walking a single transect can achieve a twenty-metre wide survey inspection coverage.

The discreet nature of the study area for this project allowed a very high level of survey coverage to be achieved. The seven members of the survey team were spaced at 20 metre intervals to provide a transect width of approximately 150 metres (10m visibility either to either side).

Surface visibility refers to the extent to which the actual soils of a ground surface are available for inspection. There are a number of factors that can affect surface visibility, including vegetation cover and the presence introduced materials. This survey encountered relatively poor surface visibility. The main impediment was grass cover and leaf litter, as well as some confined areas of introduced gravel. Surface visibility has a direct bearing on the ability of a survey team to detect some types of sites including artefact scatters and isolated artefacts. Due to the heavy rains experienced across the

region over the last 12 months or more has caused much of the study area to be covered in thick grass and the development of huge areas of blackberries, which are impenetrable in some areas (particularly around Jumping Creek and Environs).

The primary sources of visibility during the current study comprised worn tracks from vehicles and bikes, wombat burrows, areas of erosion caused by wind and water along drainage lines and small areas of ground disturbance by machinery and kids building recreational bike paths and jumps.

The study area can be divided into three sections (see orange division lines in figure 3). The first extends from the current termination point of Ellerton Dr south towards jumping creek and is characterised by steep ridgelines, dissected by a series of ephemeral drainage lines and dense ground cover. Visibility along this leg of the route was extremely low – 1% or less with primary sources of visibility comprising small erosion scalds, animal disturbance and one or two informal walking tracks. Much of this leg is undisturbed by European activities, with the exception of odd areas of rubbish dumping and the previously mentioned informal walking tracks.

The second section of the route extends through the centre of the Jumping Creek area and west to the eastern banks of the Queanbeyan River. More undulating landforms and gentle terrain characterize this area. Visibility improved considerably along this leg of the route, with a series of informal bike paths and vehicle tracks criss crossing over much of the area. Visibility along these tracks was up to 80% but sadly these areas represent only a small part of the actually route. For large sections of this path, the blackberries have formed large, impenetrably clumps covering several dozen square metres in some cases. These areas had to be walked around rather than through and visibility was 0%.

The last section of the proposed road corridor extends from the west bank of the Queanbeyan River west to the junction between Old Cooma Rd and the new Edwin Land Parkway. This leg of the route runs to the south of the existing suburb of Karabar and much of it has been subject to extensive disturbance including landscaping. Large parts of this route are covered with a thick grass cover providing 0% visibility, over skeletal soils, with outcrops of shale and quartz visible above the grass. Towards the western end of the route the grass cover thins but is instead replaced by leaf litter and native grasses. This end of the study area is again criss crossed by vehicle and recreation bike tracks and jumps and little cubbyholes for children. Visibility in along this portion of the route improved considerably with these tracks providing up to 80% visibility in some cases.

The combination of survey coverage and surface visibility is referred to as effective survey coverage. Table 1 below presents an analysis of surface visibility and survey coverage across the study area. This allows the level of effective survey coverage to be assessed.

The thorough survey coverage but poor levels of surface visibility have led to a relatively low level of effective survey coverage for this project.

Low levels of effective survey coverage occur commonly in heritage assessments, particularly where greenfields are involved. In most undeveloped areas of the region grasses or pasture-improved paddocks cover much of the ground surface and erosion scalds or areas of disturbance such as dam constructions provide the primary areas of visibility. It is only in rare situations such as where fires or large-scale disturbances have caused the exposure or upheaval of soils that levels of visibility become dramatically increased. However, these higher levels of visibility are generally accompanied by lower levels of archaeological integrity due to the accompanying movement of soil and the corresponding alteration or destruction of the archaeological context. Consequently, while low levels of visibility often make it difficult to identify sites on the surface, it can mean that any sites lying beneath have an improved integrity. The predictive model is designed to offset some of the draw backs associated with low levels of visibility on site.

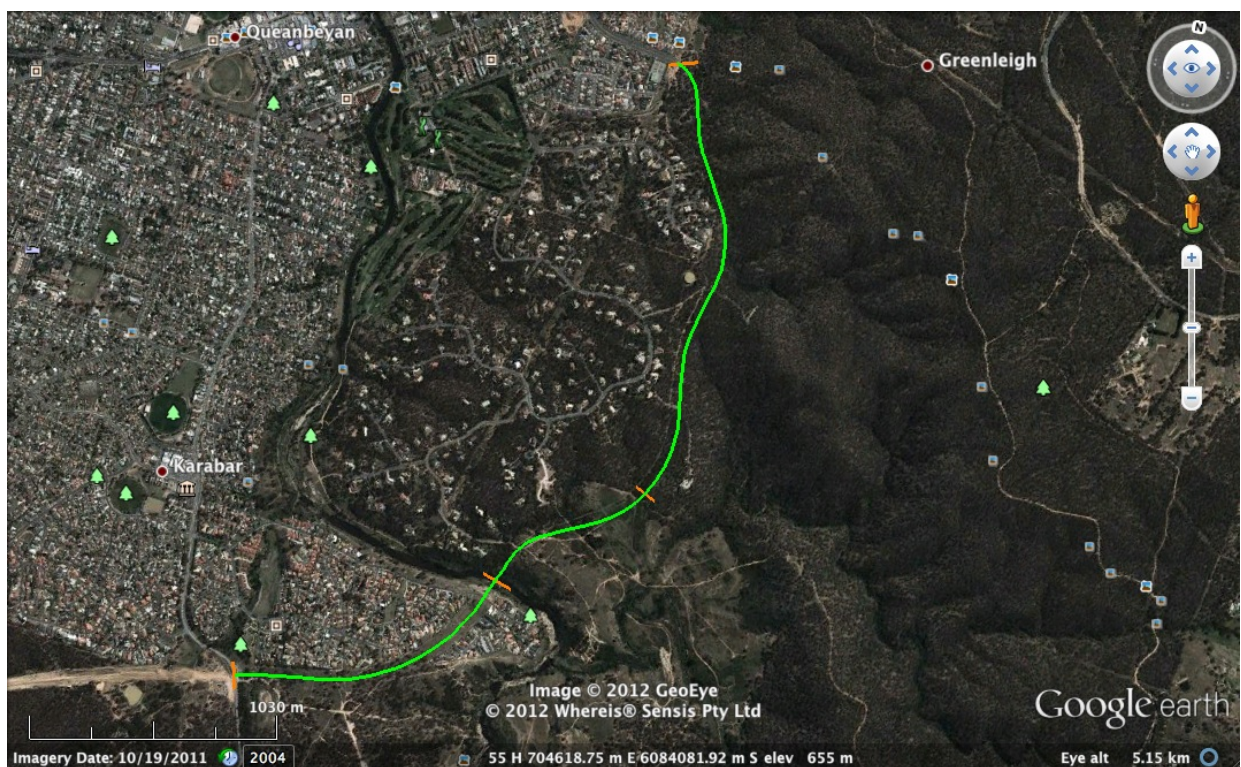


Figure 3. Maps locations of the three divisions discussed in this report.

Table 1: Estimated Survey Coverage, Surface Visibility and Effective Survey Coverage

Survey Zone	Total Area (square metres)	Estimated Survey Coverage	Estimated Surface Visibility	Effective Coverage of Section
Leg 1 – Northern portion	1900m x 140m = 266000	100.00%	0.5%	$0.005 \times$ $266000 =$ 1330
Leg 2 – Jumping Creek and Environs	744m x 140m = 104160	100.00%	2.0%	$0.02 \times$ $104160 =$ 2083.2
Leg 3 – western portion	1220m x 140m = 170800	100.00%	1.0%	0.01×170800 $=$ 1708
TOTAL	266000 + 104160 + 170800 = 540960	100.00%		1330 + 2083 + 1708 = 5121 = 0.09

2.0 Environmental Context of the Study Area

In order to best characterize and predict the nature of Aboriginal occupation across the landscape and understand archaeological site patterning, an understanding of the landscape and environment is necessary. In Aboriginal society, the landscape extends beyond economic and technological behaviour to incorporate social geography and the embodiment of Ancestral Beings.

Sadly, the archaeological context is generally only able to record the most basic aspects of Aboriginal behaviour as they relate to artefact manufacture and use and other subsistence related activities undertaken across the landscape such as raw material procurement and resource exploitation. The distribution of these natural resources occurs intermittently across the landscape and as such, Aboriginal occupation and associated archaeological manifestations occur intermittently across space. However, the dependence of Aboriginal populations on specific resources means that an understanding of the environmental resources of an area accordingly provides valuable information for predicting the type and nature of archaeological sites that might be expected to occur within an area.

The primary environmental factors known to affect archaeological patterning include the presence or absence of water, both permanent and ephemeral, animal and plant resources, stone artefact resources and terrain.

Additionally, the effects of post-depositional processes of both natural and human agencies must also be taken into consideration. These processes have a dramatic effect on archaeological site visibility and conservation. Geomorphological processes such as soil deposition and erosion can result in the movement of archaeological sites as well as their burial/exposure. Heavily vegetated areas can restrict or prevent the detection of site, while areas subject to high levels of disturbance may no longer retain artefacts or stratified deposits and may result in the production of fortuitous artefacts or edge damage (such as the development of scarring along the edges of flakes or glass fragments).

The following sections provide information regarding the landscape context of the study area including topography, geology, soils and vegetation.

The proposed route of the Ellerton Dr extension traverses several environmental landscapes. For ease of reference, the route is divided into three sections: the northern portion of the route which cuts down through the suburb of Greenleigh with Queanbeyan East to the west and Curtis Land to the east, the centre portion which extends south west and through Jumping Creek and environs and the western portion which runs from Jumping Creek, across the Queanbeyan River and west towards the intersection with Old Cooma Rd/Cooma St.

The study area lies within the outer limits of the city of Queanbeyan, with the majority of the study area falling within the Canberra Lowlands (BIOSIS 2007). The Canberra Lowlands encompass a large portion of the Canberra region and are characterized by 'subdued relief and undulating terrain' (BIOSIS 2007:12) caused by the underlying shale and siltstone of the Canberra Formation and interbedded sediments of the Deakin Volcanics (Jenkins 2000 in BIOSIS 2007:120).

2.1 Topography

The northern most portion of the route is characterized by prominent spur lines with level or gently inclined crests and slopes to the east. The landscape is dominated by moderate to high gradient slopes ($>20^\circ$), separated by incised drainage lines to the northeast and east, with elevations of between 630m to 750m asl (Saunders 2003). The portion of the route around Curtis Land lies within a transitional zone between the Canberra Lowlands to the west and the Cullarin Upland in the east, which comprises a dissected plateau with gradual northward slope and approximately 1000m to 750m asl elevation (BIOSIS 2007:12).

The Queanbeyan River lies 1.5km to the west of the study area at its furthest point (the northern portion of the route), however the proposed route curves to the southwest to meet with/cross over the river near and converges with the proposed route and feeds into the Molonglo River approximately 2km to the north. A number of minor tributaries of the Queanbeyan River also extend across the area with Bywong Creek (an ephemeral tributary of the Queanbeyan River) running to the east of this northern portion of the proposed route.

Further south the land becomes more undulating, towards Jumping Creek and Environs. This area comprises a riverine corridor with several large, level alluvial terraces, ridgelines and associated gently sloping foot slopes. The Queanbeyan River flows along the southwestern edge of the Jumping Creek area, with the tributary of Jumping Creek following down into the Queanbeyan River corridor (Hamm 2007). The proposed route of Ellerton Drive crosses the Queanbeyan River at this western boundary to Jumping Creek and Environs.

The altitude of the Queanbeyan River is 575m above sea level, and is known to have flooded several times during recorded history (and including very recent times). These floods of the Queanbeyan River caused severe local flooding of Jumping Creek leaving the surrounding areas inundated. Much of the Jumping Creek area is known to become waterlogged after rain (Kuskie 1989).

The topography along the final leg of the Ellerton Dr extension is generally undulating, with a large north/south trending ridgeline cutting through the southeastern portion of this leg. The crest of this ridge is generally broad and flat. The northeastern portion of

this leg of the route passes through suburban areas between Barracks Flat Drive to the west and Doeburl Place to the east. The land to the south of the study route is dissected by a number of minor drainage lines with intermittent flow, draining to Barracks Creek to the west (Navin Officer 1990). Towards Old Cooma Rd the terrain becomes gently to steeply undulating with east/west trending ridgelines and eroded gullies running between them.

2.2 Geology

The underlying geology of the area comprises the Ordovician metasediments from the Pittman Formation and the dacitic tuff of the Colinton Volcanics. The northern portion of the route is dominated by the Pitman Formation, which is characterized by quartz rich sandstone, siltstone and shale with minor occurrences of chert and calcareous sandstone (Abell 1991:7). Small outcrops of bedrock are visible along the mid and upper slopes with sparsely distributed natural quartz.

Further south and towards the Queanbeyan River and Jumping Creek area Towards the Queanbeyan River lies the metamorphosed sedimentary rocks of the Colinton Volcanics, while limestone deposits ('white rocks') run along the eastern bank of the Queanbeyan River. Outcrops of these 'white rocks' occur in several places along the eastern bank of the river (Navin Officer 1990). Hornfels are associated with some of the limestones and local outcrops of quartz are ironstone are known to occur along with quartzite and possibly chert associated with the Pittman Formation (Kuskie 1989:16).

Soils in the area vary in accordance with underlying geology. Soils along the northern portion of the route are generally lithosols, and are thus thin and stony with little if any pedological differentiation (Saunders 2003; Jenkins 2000 in BIOSIS 2007). Alluvial, colluvial and residual soils are all noted to occur within the Jumping Creek area (Kuskie 1989:16). Residual soils are very thin and cover much of the area and are generally restricted to ridge crests and slopes. Colluvial soils are deposited on lower slopes and alluvial terraces in the area having been washed down from the ridges, while alluvial soils occupy the channel areas of the creeks and alluvial terraces and range in thickness up to 2m and tend to be silty sands (Kuskie 1989:16). Along the southwestern portion of the route, west of the River and towards Cooma St, soils are primarily adamellite and are shallow in depth (20-30cm).

Moving further to the west towards the Edwin Land Parkway, soils form part of the Florey Landforms, which tend to be found in valley floor or lower slope contexts and on gently sloping terrain. The upper layers of the soil tend not to exceed 50mm and overly a grayish compacted and very hard clay layer (Dearling 2007:8).

Suitable raw materials for exploitation throughout the proposed route therefore include quartz, limestone, shale, volcanics, quartzite and chert. In addition, a wide array of river

pebbles occurs in various creek lines (including Jumping Creek) and the nearby Queanbeyan River.

2.3 Vegetation

Vegetation throughout the study area has been extensively modified by European activities to the extent that little original vegetation remains. Much of the area would once have supported a continuous cover of dry sclerophyll forest, dominated by Eucalypts (Kuskie 1989) and grading into savanna woodland. At present, the northern portion of the route around Curtis land and Environs, comprises low open dry Eucalypt woodland/forest regrowth with a predominance of stringy bark, a sparse low shrub layer and a ground layer of mainly native tussock grass (Saunders 2003).

Further south towards Jumping Creek and to the west towards Cooma St vegetation varies from open or medium density woodland to grassland. Very few mature trees are present, with considerable new growth and understory regeneration present, comprising wattles and Eucalypts. Towards the River and around Jumping Creek are a number of introduced species and weeds including grasses, poplars, willows and blackberries.

2.4 Climate

The climate of the Queanbeyan region is generally cool and dry with local variations across the city. In summer, average maximum daytime temperatures reach 29.3° celcius. In winter the evenings are cold and frosty with average minimum temperatures recorded at -0.1° celcius. Mean annual rainfall for the area is 630mm, which is distributed relatively evenly throughout the year. These conditions are noted to be mild and 'very suitable for year-round hunter-gatherer habitation of all parts of the region' (BIOSIS 2007:14).

2.5 Current Land Use

The entire length of the proposed Ellerton Dr extension has been subject to extensive modification by European activities. This includes widespread clearance of original vegetation and introduced pastures for grazing which has been practiced throughout the area for the last 180 years. Additional disturbance includes the construction and grading of fire trails, intensive bike trails and recreational 4WD activity. Clearance of the area for the collection of timber for wood burning fires has continued until the recent past with an abundance of tree stumps and general absence of old growth trees. The most significant disturbance occurs either side of the Queanbeyan River around the Jumping Creek and Gale Precinct areas due the historic quarrying/mining of limestone, with rock and brick kilns present in some areas. A gravel quarry, which has been used as a landfill site, also occurs where the proposed Ellerton Dr extension joins the Edwin Land Parkway at the intersection with Cooma St/Old Cooma Rd.

3.0 Aboriginal Community Consultation

Aboriginal consultation for this project was conducted in accordance with the Office of Environment and Heritage's *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRP) (NSW DECCW 2010a).

3.1 Initial Consultation

In order to identify, notify and register Aboriginal people whom may hold relevant cultural knowledge for the Queanbeyan area, and in order to fulfill the requirements of section 4.1.2 of the ACHCRP project notifications and requests (dated 20th June 2012) for contact details for any known Aboriginal community groups or registered stakeholders in the area were sent to the following (a copy of letters sent is included in Appendix A and copies of responses are included in Appendix B):

- Sandie Jones of the Queanbeyan Office, NSW OEH
- The Ngambri Local Aboriginal Land Council
- The Registrar, *Aboriginal Land Rights Act 1983*
- The National Native Title Tribunal
- Native Title Services Corporation Limited
- The Queanbeyan City Council
- The Murrumbidgee Catchment Authority.

In addition advertisements for interested stakeholders were placed in the newspapers listed below in accordance with Sections 4.12-4.13 of the consultation requirements, inviting Aboriginal parties to register and interest in the project (copies of ads are included in Appendix C):

- Koori Mail - 27th June 2012
- Queanbeyan Chronicle – 3rd July 2012
- Indigenous Times – 27th June 2012
- Canberra Times – 27th June 2012
- Queanbeyan Age – 29th June 2012

Following the provision of advice from Sandie Jones of OEH (dated 22nd June 2012) and Greg Packer of the Murrumbidgee Catchment Authority, a list of potential cultural knowledge holders was compiled and letters inviting expressions of interest were sent to the following list of representatives:

- Dorothy Carroll – Ngunawal Heritage Aboriginal Corporation
- Ngarigo Elders
- Buru Ngunawal Aboriginal Corporation
- Konanggo Aboriginal Cultural Heritage Services
- Yurwang Gundana Consultancy Cultural Heritage Services
- Yukembruck Merung Ngarigo Consultancy
- Gunjeewong Cultural Heritage Aboriginal Corporation
- Matilda House

- Ngunnawal Elders Corporation
- Carl Brown – King Brown Tribal Group
- Colleen Dixon – Ngunawal Aboriginal Heritage Corporation

Expressions of interest were registered by the following groups (see Appendix D):

- Buru Ngunawal Aboriginal Corporation
- Ngambri Local Aboriginal Land Council
- Ngununawal Aboriginal Heritage Corporation
- King Brown Tribal Group
- Ngunnawal Elders Council – Mr Arnold Williams

A sixth expression of interest was provided over the phone by Rebecca Ingram of Cowra, representing the Karley Ngunnawal Descendents in response to the ad in the Koori Times. This expression of interest was received after the close date (23rd July 2012) for applications and therefore post-dated the offer of employment for fieldwork participation.

3.2 Fieldwork Participation and Consultation

On the 1st of August phone calls were made to each of the groups who registered an interest in the project within the given timeframes. A member from each group was invited to participate in a day of fieldwork to survey the length of the proposed extension route. The community involvement was to aid in the identification of Aboriginal sites, to provide cultural knowledge on the area and to provide advice on the future management of any sites likely to be impacted by the proposed development. This offer of employment was confirmed in writing (see Appendix E)

Fieldwork was undertaken on the 2nd August 2012 and involved a representative from each of the registered groups. The field team comprised:

- Wally Bell – Buru Ngunawal Aboriginal Corporation
- Geoffrey Murray – Ngambri Local Aboriginal Land Council
- Graeme Dobson – Ngunawal Aboriginal Heritage Corporation
- Carl Brown – King Brown Tribal Group
- Arnold Williams – Ngunawal Elders Council

Attempts to contact Rebecca Ingram and her cousin Eva Cohen using the contact details provided were unsuccessful. Emails bounced back and numbers were unanswered.

The survey methodology and nature of the development proposal were discussed before fieldwork commenced. Community representatives were invited to express any concerns and highlight any areas of high cultural significance in the area. None were indicated. All management recommendations and assessments of significance made in this report incorporate the communities views and wishes.

3.3 Post Fieldwork Consultation

A copy of this report was provided to each of the participating community groups as well as being sent via post to Rebecca Ingram, with a request to receive all comments and feedback by 16th September. Written responses were provided by Ngambri Local Aboriginal Land Council, Buru Ngunawal Aboriginal Corporation and the Ngunnawal Aboriginal Heritage Corporation and are included in Appendix I. The report has been subsequently amended to include all feedback received by the Aboriginal Community.

4.0 Aboriginal Archaeological Context

4.1 Heritage Register Searches and Previously Recorded Sites

A search of the Office of Environment of Heritage Aboriginal Heritage Information Management System (AHIMS) was made on the 26th June 2012. The following search area was provided: Lat, Long from: 149.22802, -35.37699 to Lat, Long To:-35.35126, 149.27099 with a buffer of 50m. A total of 54 previously recorded sites were identified within this geographical range, the details of which are provided in Appendix F. A total of 8 sites lie within 100m of the proposed route of the Ellerton Dr Extension. These are listed in table 2. Several of these sites have been assigned multiple AHIMS numbers following recording by several archaeologists.

During the course of background archaeological research at the Queanbeyan Branch of the OEH it became apparent that a further 14 sites occurred within the broader study area that the AHIMS search had failed to identify. All Aboriginal sites previously recorded in the area are included on maps in figures 4 to 6, however none of them occur within 100m of the proposed Ellerton Dr alignment.

Sites identified in the broad search area comprise a single burial, one potential archaeological deposit, 10 isolated finds and 56 artefact scatters and all comprising open sites. Those sites occurring within 100m of the proposed Ellerton Dr Extension comprise 1 isolated find and 7 artefact scatters.

No Aboriginal heritage sites are listed on the State Heritage Register, National Heritage List or Commonwealth Heritage List, under the *Environment Protection and Biodiversity Conservation Act 1999*, the *Queanbeyan Local Environmental Plan (LEP) (Draft 2011)* or under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* within the study area.

The draft Queanbeyan LEP (Draft 2011) has completed its public exhibition period and is currently with the Minister for Planning and Infrastructure for signing and gazetting, but is not in-force. There are two archaeological items listed near the current study area:

- A2 – Marchiori's Lime Kiln and Quarry
- A4 – White Rocks Limestone Kilns

Both of these sites are identified as having local historic significance and are discussed in detail in section 5.3. No Aboriginal sites or conservation areas are listed on the LEP within the investigation area.

A search of the Native Title Tribunal, undertaken on the 20th of June 2012, identified that no determinations of Native Title, registered Native Title Determination applications

(Claimants) or Indigenous Land Use Agreements (ILUAs) apply to the study area (a copy of these results is included at Appendix G).

4.2 Limitations to Heritage Site Searches

Importantly, it must be remembered that sites recorded on AHIMS are necessarily limited to areas where investigations have been carried out and sites have been recorded. Areas where sites are not recorded to exist may simply be due to a lack of archaeological investigation in the area or to unsuitable environmental conditions that prohibit the identification of sites (such as poor visibility).

In addition, the Aboriginal community may have chosen not to disclose the location of culturally significant sites in the area if these sites have not previously been under threat.

4.3 Previous Archaeological Research

4.3.1 Regional Overview

Archaeological research has proven Aboriginal occupation of Australia for at least 40,000 years and most likely up to 60,000 years (Mulvaney and Kamminga 1999). From 35,000BP it is clear that the major environmental zones in Australia (and including Tasmania) were occupied, with the Pleistocene occupation of southeastern Australia evidenced from three separate locations. Birrigai Rockshelter, located in the ACT, has been dated to between 21,000 and 3,000 years BP (Flood et al. 1987), the Wombeyan Caves date to approximately 10,000 BP (Navin Officer 2003) and Bulee Brook and Bob's Cave in the hinterland of the south coast date to between 10,000 and 12,000 years BP (Boot 1994).

Between 25,000 to 12,000 years BP, the once moderate climate of Australia was replaced by dry, intensely hot/intensely cold temperatures (depending upon geographical location) associated with the Last Glacial Maximum (LGM). The southeastern portions of Australia experienced, monthly land temperatures averaging between 6 to 10° lower than present conditions (celcius). These cold, dry and windy conditions served to alter the structure of vegetation in the area from forest to dry grassy plains and/or shrub lands (Mulvaney and Kamminga 1999; Dearling 2007).

At the end of the LGM, temperatures rose across the globe, with the warmer conditions melting huge ice masses and resulting in a worldwide rise in sea levels. Rises in sea level occurred over a period of several thousand years, during which time they fluctuated enormously, finally stabilising at their current levels by about 6000BP. Accompanying this warmer weather (the Holocene period) were changes in vegetation and hydrological patterns, with forests again inhabiting those areas where grass and shrubs predominated during the LGM.

Based on evidence uncovered from excavations at Birrigai Rockshelter, Aboriginal occupation of Queanbeyan is dated to 21,000BP (Flood 1987 and BIOSIS 2007:19), however the majority of sites located in south-eastern Australia date from the mid to late Holocene (Dibden 2004).

4.3.2 Research in the Queanbeyan Area

A large number of archaeological investigations have been undertaken in the Queanbeyan area beginning in the mid 1970s. The vast majority of these have been surveys undertaken as part of impact assessments and are therefore biased towards development/impact driven assessments that focus on site specifics. However a small number of research programs have also been undertaken (e.g. Kuskie 1989). Archaeological excavations in the area have been sporadic and represent a tiny portion of the heritage work conducted in the region.

One of the earliest studies in the area was undertaken by Smith (1975) who surveyed 1700ha of the Queanbeyan River valley in preparation for the Googong Reservoir. The survey identified nine isolated finds, an open campsite (comprising 81 artefacts on a low ridge within 90m of the Queanbeyan River) and a possible stone arrangement (comprising two low stone cairns approximately 0.6m apart).

Four-hundred hectares at Jerrabomberra Park housing estate was surveyed in 1984 by Lewis. The area included spur crests, low gradient slopes and a section of Jerrabomberra Creek to the south of Queanbeyan. The investigation identified two open scatters comprising a total of 15 artefacts (several made from quartz) and both occurred on low gradient mid slopes.

An area of 100ha was surveyed around the London Bridge karst area around Burra Creek in 1989 (Boot and Cooke) including alluvial flats and creek banks plus the two major ridgelines running parallel to Burra Creek. A total of five isolated finds and one open scatter were identified, in addition to excavations undertaken at two limestone caves (Douglas Cave and Burra Shelter). Assemblages at both caves included a handful of stone artefacts manufactured from chalcedony, milky quartz and chert and including flakes, flaked pieces, cores and 'chips'. The assemblages were argued to indicate sparse Aboriginal occupation of the caves during the last 1000 years.

In 1991 Access Archaeology identified nine artefact scatters and three isolated finds across the proposed 210ha 'Poplars' development area, located to the west of Jerrabomberra. All sites were located on spur crests and low gradient slopes above Jerrabomberra Creek.



Figure 4. Shows previously recorded Aboriginal sites within the northern portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.

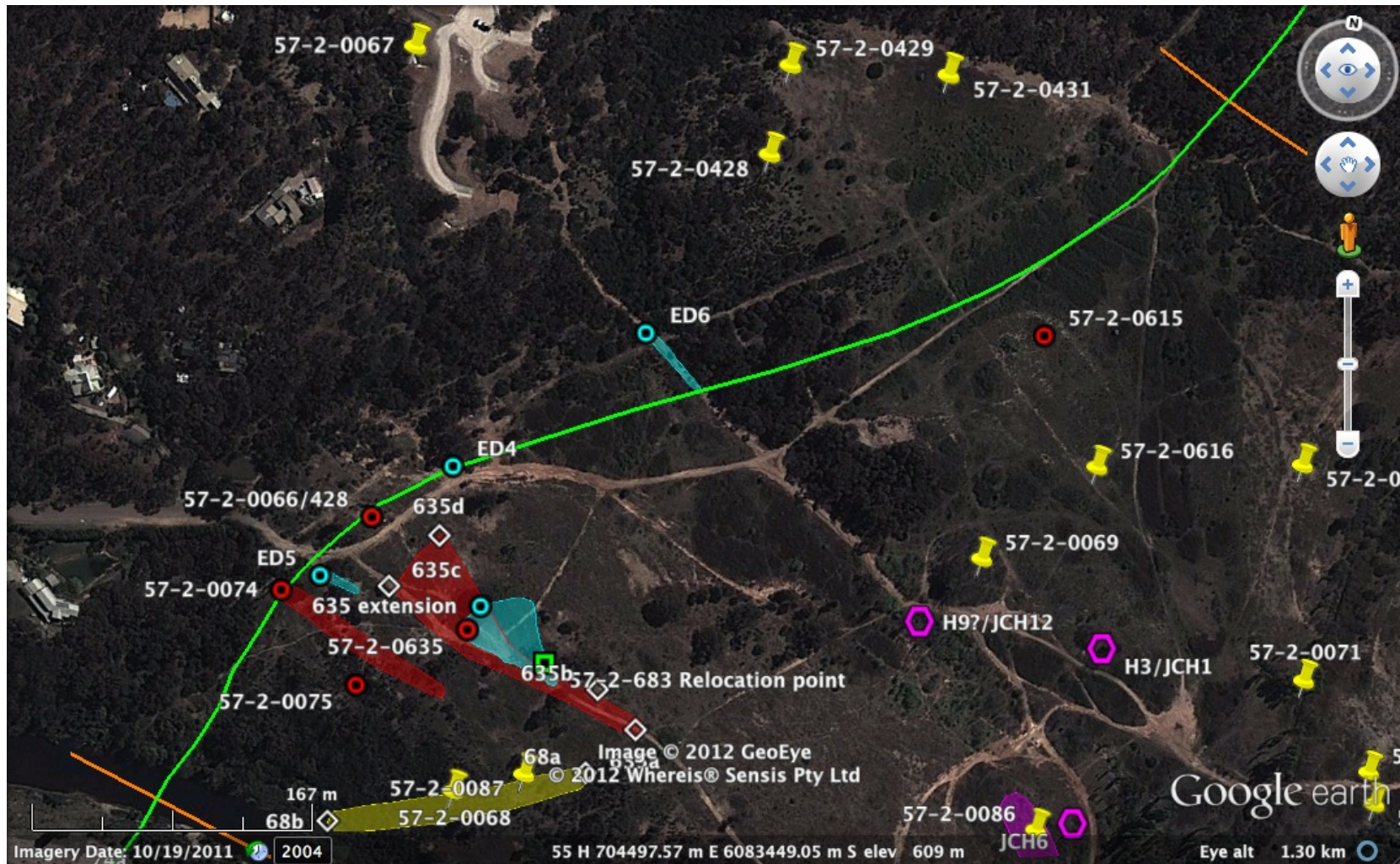


Figure 5. Shows previously recorded Aboriginal sites within the Jumping Creek and Environs portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.

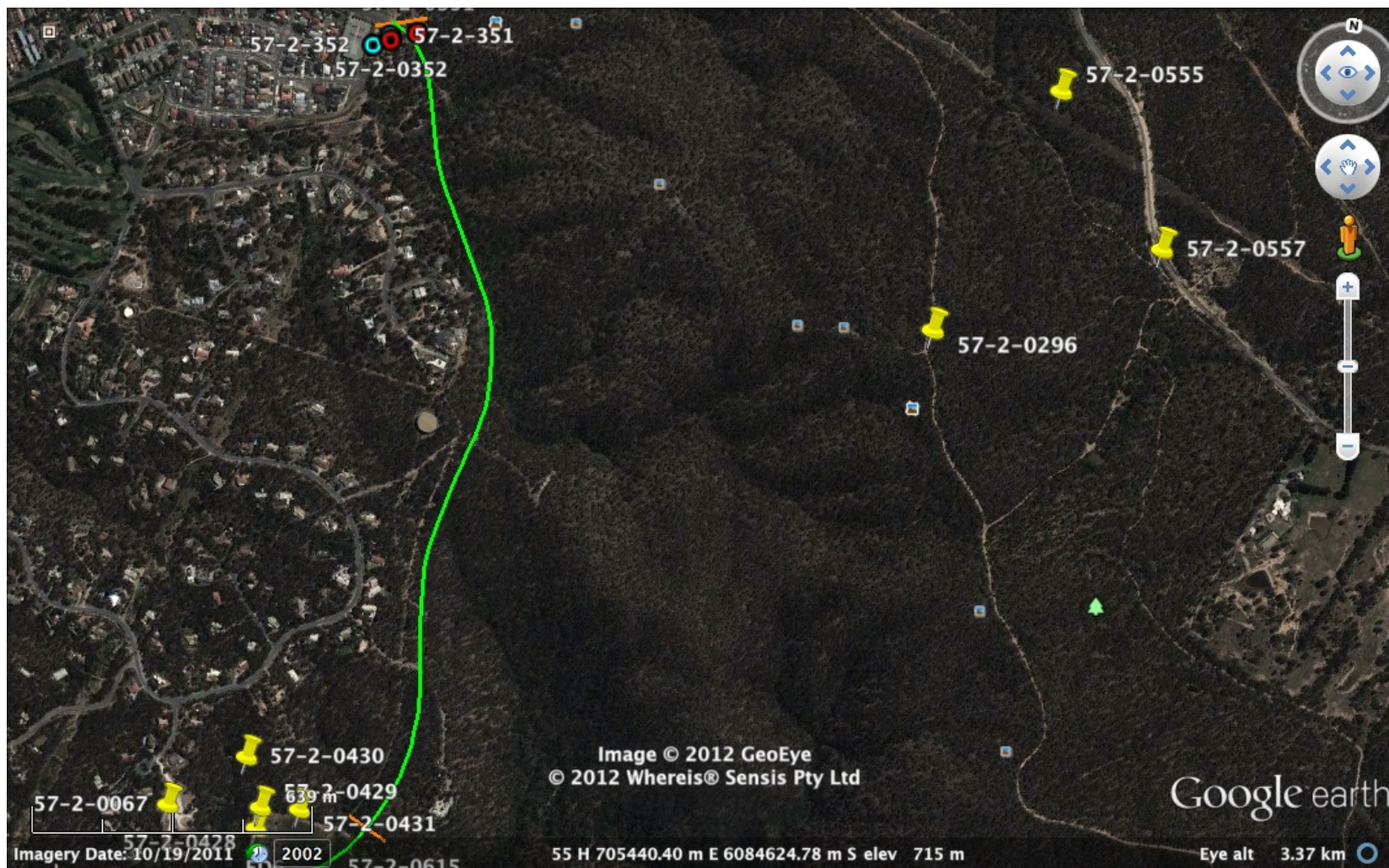


Figure 6. Shows previously recorded Aboriginal sites within the southwest portion of the route alignment. Those sites marked with red occur less than 100m from the centerline of the proposed development. Sites marked yellow are more than 100m from the centerline of the development.

Table 2. History and details of previously recorded sites within 100m of the proposed Ellerton Drive Extension

AHIMS Site no:	Site Name and Recorder	Grid Reference	Site Details	Landform	Condition	Proximity to Ellerton Dr Route
57-2-66	JC1 (complex with JC9 and JC10 (Boot and Heffernan 1989)	704312E 6083383N	Small artefact scatter – 7 artefacts including blade core, pebble flakes, flaked pieces and flake made from silcrete and volcanics.	Located on lower northern slopes of central ridge within 150m of Queanbeyan River. Underlying volcanic geology. Southeast aspect in Riverine/Forest environment.	Disturbed by track grading and vehicles.	3m
57-2-0428	Relocated Navin Officer 2004		Isolated quartz flake with strong potential to be part of a larger site with sub-surface deposits.			
	SU9/L1 Relocated (Dibden 2009)		Small scatter of 5 artefacts including flaked pieces and flakes made from tuff, quartzite, volcanics and chert.			
	JC1 (Navin Officer 2009)		Unable to be relocated			

Archaeological Assessment of the Proposed Ellerton Drive Extension, Queanbeyan
CHMA 2012

AHIMS Site no:	Site Name and Recorder	Grid Reference	Site Details	Landform	Condition	Proximity to Ellerton Dr Route
57-2-74	JC9 (Complex including JC1 and JC10 Boot and Heffernan 1989) JCV5 may be part of JC10 (Kuskie 1989) SU1/L1 (Dibden 2009)	704263E 6083335N to 704363E 6083285N	Large artefact scatter containing 65 artefacts including flakes, pebble flakes, flaked pieces, blade cores, blades, backed blades and pebbles made from silcrete, quartzite, chert, quartz and volcanics. Site area is approx. 120m x 3.5m Large scatter of 107 artefacts with contents as described by Boot and Heffernan (1989). Scatter of 81 artefacts with contents as described by Boot and Heffernan (1989).	Located on track, which leads from Lonergan Drive up to top of central ridge. Landform is thus a ridge crest and slope 50-60m from the Queanbeyan River in a Riverine environment with volcanic underlying geology. Located on a gently sloping spur (<2°) with west to southwesterly aspect and within 400m of Jumping Creek. Located on crest of gently inclined spur with open aspect and eroded to bedrock.	Disturbance by vehicles. A stone hatchet was removed and deposited with Ngunnawal LALC in June 1998. Disturbance by vehicles and mining Highly disturbed	Route runs through PAD

Archaeological Assessment of the Proposed Ellerton Drive Extension, Queanbeyan
CHMA 2012

AHIMS Site no:	Site Name and Recorder	Grid Reference	Site Details	Landform	Condition	Proximity to Ellerton Dr Route
57-2-75	JC10 (Complex including JC1 and JC9 Boot and Heffernan 1989) Suggests may be part of JCV5 (Kuskie 1989) Possibly relocated as SU19/L2	704312E 6083285N	Site is an open scatter comprising several quartz flakes, flaked pieces and cores. See JC5 details above Open scatter of two volcanic flakes.	Located on centre of a ridge slope with southwesterly aspect, 30-40m from the Queanbeyan River in a riverine environment with volcanic underlying geology. Located on a moderately inclined simple slope with southerly aspect.	Disturbed by slope erosion Moderately disturbed	65m
57-2-110	Fairlane Estate 1 (Navin Officer 1991)	703762E 6082835N	Scatter of 6 artefacts including quartz, silcrete and chert. Site area is approx. 10m x 100m. SITE DESTROYED Oct 1991	Located on a small ridgeline spur, 500m from Barracks Creek/Queanbeyan Rv in forest/riverine environment with volcanic underlying geology.	Disturbed by vegetation clearance, power-line easement, erosion, and track development.	85m

Archaeological Assessment of the Proposed Ellerton Drive Extension, Queanbeyan
CHMA 2012

AHIMS Site no:	Site Name and Recorder	Grid Reference	Site Details	Landform	Condition	Proximity to Ellerton Dr Route
57-2-351	Thomas Royal Garden 1 (Saunders 2003)	704580E 6085280N	Isolated find – volcanic anvil stone, flaked and pitting on one surface.	Located on low-level footslope of steep-sided ridgeline spur. Occurs 200m from former tributary of the Queanbeyan Rv in dry open woodland/forest with sedimentary underlying geology.	Disturbed by informal public site use, trail bike riding and rubbish dumping.	22m
57-2-352	Thomas Royal Garden 2 (Saunders 2003)	704520E 6085260N	Scatter of 4 artefacts comprising flakes and a manuport (anvil?) made from quartz and porphyritic volcanics	Located in area of recent earthworks disturbance on low- level footslope of steep-sided ridgeline spur. Occurs 170m from former tributary of the Queanbeyan Rv in dry open woodland/forest with sedimentary underlying geology.	Disturbed by informal public site use, trail bike riding and rubbish dumping	30m
57-2-0615	Jumping Creek SU10/L1 (Dibden 2009)	704686E 6083528N	Scatter of 5 stone artefacts within an area of 900sqm	Located on a simple slope with eastern aspect and moderate inclination. Occurs 350m from Jumping Creek in cleared land that was once woodland.	Highly disturbed	37m

Archaeological Assessment of the Proposed Ellerton Drive Extension, Queanbeyan
CHMA 2012

AHIMS Site no:	Site Name and Recorder	Grid Reference	Site Details	Landform	Condition	Proximity to Ellerton Dr Route
57-2- 635	JCR2 (Navin Officer 2009)	704476E 6083278N to 704452E 6083299N to 704326E 6083344N to 704352E 6083376N	Scatter of at least 150 artefacts extending over an area of 180m x 30m and including flakes and a core made from tuff, silcrete, quartz and volcanic (however a sample of only 10 artefacts were taken). SITE RELOCATED TO 57- 2-683 Nov 2010	Located on a knoll on the western edge of a ridgeline amongst shallow sandy loam.	Highly disturbed by erosion and vehicle tracks.	Edge of PAD 31m

A handful of studies have also been undertaken in Kowen Forest district, located approximately 4km north of the study area, beginning in 1985 when English surveyed the Molonglo Gorge and Kowen Forrest for his thesis, locating twenty-seven sites, dominated largely by low density scatters occurring on elevated, level ground in close proximity to creek lines and river pools.

A total of thirty-four artefact scatters and thirty-five isolated finds were also identified during archaeological survey through the Kowen forest district (Bulbeck and Boot 1990). The study found at sites were dominated by flakes, flaked pieces and cores made from quartz, quartzite and silcrete and were mainly concentrated along the major creeks, rather than along the Molonglo River.

Dividing the landscape into prevailing slope characteristics, Bulbeck and Boot determined archaeological site densities using artefacts per hectare (1990 see also Hamm 2007:20). Highest artefact densities thus occur on strongly dropping land near permanent water (approx 93 artefacts per ha) followed by low spurs dropping to permanent water (approx 80 artefacts per ha). Ridges extending from NSW-ACT ridgeline and flat land near permanent water generally result in approximately 31 artefacts and 21 artefacts per hectare respectively.

A third survey in the Kowen Forrest area (AASC 1995) identified a possible scarred tree and an additional nine artefact scatters and three isolated finds.

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).

Three isolated finds and two small low density open scatters were identified during a survey of 130ha at the proposed 'Weetalabah' subdivision located immediately east of 'The Ridgway' (previously surveyed by Lance 1984 but without identifying any sites) (Williams and Barber 1993; Saunders 1999).

In 2001(a) Saunders undertook an archaeological survey of 73 ha located approximately 2.5km to the east of the proposed Ellerton Dr extension, on portion 125 Wanna Wanna Rd. The survey identified only three Aboriginal sites, all of which were located on basal slopes and comprised two isolated finds and a scatter of two artefacts. Artefacts included flakes and a flaked piece made from fine-grained siliceous stone and quartz.

Also in 2001 (b) Saunders surveyed a 216ha property bordering the Queanbeyan River ('Talpa Crest'). The survey identified 14 sites and 2 potential archaeological deposits including 7 open artefact scatters and 7 isolated finds. Three of the open sites identified were extensive and two contained an estimated 100-500 artefacts. Flakes and flaked pieces occurred most commonly, along with a handful of cores, blades and hammer stones. Quartz and quartzite dominated the assemblages along with small proportions of chert, silcrete, volcanic and metamorphosed tuff and sedimentary materials.

A number of investigations have also been undertaken through the Cuumbeun Nature Reserve which lies less than 1km to the east of the current study area. The primary surveys conducted through the Cuumbeun Nature Reserve were undertaken by Saunders (2000) and Dearling and Grinsberg (2002). Saunders' investigation was for the Eastern Gasline Project, during which she identified two stone artefact sites located on sloping ground above Scabbing Flat Creek (Site OC2 contained 25 artefacts which were salvaged prior to the pipeline installation; Site OC1 was avoided).

Dearling and Grinsberg (2002) completed a study of three national parks within the Queanbeyan region as part of a larger management plan for a number of Nature Reserves within the South West Slopes Region. Within the Queanbeyan area they explored the Cuumbeun Nature Reserve, Stony Creek Nature Reserve and Wanna Wanna Nature Reserve. Three transects were surveyed through the Cuumbeun Nature Reserve covering a total area of 4.25ha. The survey focused primarily on all major tracks within the reserve but included a number of off track locations as well. Three stone artefact scatters and an isolated find were recorded, with two sites located on upper slopes and two on ridge crests. Scatter sizes ranged between 3 and 37 artefacts and comprised flakes, broken flakes and microblades made from chert and quartz.

In 2007 Hamm undertook a survey of a 15.2km telecommunications cable route located between Wright's Park in Queanbeyan and the boundary of the Headquarters Joint Operations Centre (HQJOC) base at Bungendore, NSW. The survey route passed through Stony Creek Nature Reserve, Cuumbeun Nature Reserve, Diary Station Creek, Wanna Wanna Nature Reserve, Burbong Molonglo Rv Crossing and Jumping Creek.

The survey identified a total of 15 sites, 6 of which occurred within the Cuumbeun Nature Reserve and comprise 4 artefact scatters (between 2 and 28 artefacts per scatter) and two isolated finds. All sites were found on simple slopes associated with either ridge crests or

creek flats with the largest site found comprising 28 artefacts located on the western margin of Scabbing Flat Creek. Assemblages included unretouched flakes, retouched flakes, backed artefacts, a core and debris manufactured from chert, silcrete and quartz. Hamm observed that these 'sites are expected in their current topographical setting, given previous modeling' (2007:39), with larger sites predominantly located near permanent water and above existing food zones such as river terrace features or spurs). Technologically, the assemblages are defined as maintenance and reduction sites with quartz and silcrete most commonly used while chert and volcanics tended to be comparatively rare.

Hughes (2003) undertook an archaeological assessment of a rural subdivision at Bernallah located approximately 1km east of Wanna Wanna Rd and approximately 2.5km east of the proposed Ellerton Dr extension. The study area comprised 47ha of dissected hilly terrain drained by the west flowing headwater tributary systems of Jumping Creek (and associated valley). The landscape is described as a dissected plateau with elevations from between 100m and 750m. Vegetation comprised dry/sclerophyll woodland/forest with quartz outcrops occurring locally. Much of the area had been subject to extensive clearing with much of the soil A horizon having been stripped. A single site was located (previously identified by Dibden) comprising 7 artefacts manufactured from quartz, volcanic and chert and located 100m from the convergence of two creek lines.

In 2003 and 2004 archaeological surveys were conducted of the majority of the proposed Defense Headquarters Joint Operations Command site, which is located to the north east of Queanbeyan and south of the Kings Highway. The 2003 survey (Navin Officer 2003) identified 18 Aboriginal sites comprising 9 small, low-density artefact scatters, 9 isolated artefacts and several PADs. The subsequent survey (Navin Officer 2004) located a further 3 low density artefact scatters (two with associated PADs) and an isolated find. Artefact assemblages comprised flakes, flaked pieces, cores and blades manufactured from quartz, silcrete, chert, volcanics, tuff and quartzite. All of the sites were located on spur crests.

Williams (2006) subsequently undertook an extensive subsurface testing program in the identified PADs and including a stone procurement site. The investigation utilized 870 auger probes and 58 hand excavated pits. In excess of 3000 artefacts were recovered overall, with quartz and silcrete dominant raw materials. A wide range of artefact classes was identified, including flakes, cores and a number of backed artefacts. Site locations were consistent with general regional models for the area, tending to occur on elevated, reasonably level and well drained landforms within close proximity to water (Williams 2006).

In 2007 Saunders undertook a survey of 272 ha of land, approximately 2km west of the proposed Ellerton Dr extension, along Sugarloaf Rd, Carwoola. A total of 4 artefact scatters (3 with associated PADs) and 4 isolated finds occurred within the open and gently

undulating valley of Anthill Creek catchment, with the majority of sites located less than 120m from the Creek.

The Queanbeyan showground has also been recorded as a 'ceremonial site' of regional importance (NPWS 57-2-0064) on the basis of historical records of Aboriginal tradition. A nearby burial was also uncovered in 1935 while a small artefact scatter was recorded by Cooke in 1987 (Saunders 1997).

4.3.3 Previous Investigations in the Current Study Area

There have been several archaeological investigations previously undertaken along or in the immediate vicinity of various sections of the proposed route of the Ellerton Dr extension.

The northernmost section of the alignment passes between the existing suburb of Greenleigh and the proposed Curtis Land, which lies to the west. Curtis Land was originally surveyed by Saunders (2003) and included a 70ha area marked for the proposed residential subdivision. Two Aboriginal sites were recorded (Sites 57-2-351 and 57-2-352) during the survey. These sites were found outside the study area along the western boundary of Curtis Land towards the present residential boundary. The sites comprised an isolated find and a small scatter of four artefacts, both of which were located on the basal slope of a spur. Site 57-2-351 lies within 200m of the current study area, while in 2007 a recommendation was made by BIOSIS for the relocation of site 57-2-352 ahead of residential development.

Curtis Land is bordered to the east by the Cuumbeun Nature Reserve and to the south by the 'rugged undeveloped land of the Faunce Hill ridgeline complex; (Saunders 2003:2). Due to the steep gradient of much of the area and absence of permanent water sources (Queanbeyan Rv occurs 1.25km to the west and Scabbing Flat Creek 1km to the east), Saunders assessed the archaeological potential of the remainder of the study area as being low.

A number of investigations have also been undertaken further south along the route, towards Jumping Creek. South Jumping Creek was initially surveyed by Winston-Gregson (1989) who identified 8 open artefact scatters and to manuports on the eastern side of the Queanbeyan River. Identified artefacts comprised worked river cobbles and microliths made from chert, silcrete and quartzite, with all sites located on ridgetops, indicating their probable use as access routes.

Also in 1989, Boot and Heffernan surveyed a 100ha area of land known as JCDPS and identified a total of 20 sites, four of which contained between 50 and 200 stone artefacts. Assemblage composition included a wide variety of artefact classes and raw materials including flakes, retouched flakes, flaked pieces, cores, backed blades and blade cores

(plus thumbnail scrapers) made from quartz, silcrete, quartzites, chert, volcanic rock and mudstone. The vast majority of artefacts are recorded as being unmodified debitage and flaked pieces and were manufactured on local stone.

Boot and Heffernan (1989) divided the landscape into landform elements and location within the property in order to identify patterns in grouping of site density and distribution (Dibden 2009) as well as distribution of artefact type and raw materials. The largest and most dense sites were identified around the confluence of Jumping Creek and its northern boundary and extend away from the river to the flats and adjacent lower slopes. Additional smaller and lower-density sites occurred along the central ridge and lower slopes of ridges running along the northwestern boundary of the study area, while isolated artefacts were recorded on ridge crests on the study area's southern boundary.

Comparisons with the results of other local surveys indicated that Jumping Creek contained high archaeological potential when compared with other areas (Boot and Heffernan 2009).

Five of the sites identified by Boot and Heffernan (1989) fall within 1km of the proposed route of the Ellerton Drive Extension: Sites JC1, JC2, JC3, JC9, and JC10.

In the same year, Peter Kuskie (1989) undertook fieldwork in the Jumping Creek area as part of his honours degree (ANU). Kuskie recorded 20 Aboriginal sites, which included 4 additional sites as well as 16 previously recorded sites. Two sites recorded by Boot and Heffernan (1989) could not be relocated, while the section of the southwest end of the Jumping Creek area that contained Boot and Heffernan's site JC20 was not included in Kuskie's study area. Artefact types recorded by Kuskie included anvils, manuports, hammerstones, flakes, blades, backed blades, blade cores and thumbnail scrapers manufactured from silcrete, quartzite, quartz, chert, volcanic, sedimentary, mudstone and jasper. Quartz, quartzite and volcanic dominated the assemblages, with proximity to raw materials argued to be the primary determinant of intersite variability (Kuskie 1989).

Kuskie observed an absence of artefacts in several surveyed areas; in particular the steep slopes of the eastern and northern ridges, the area east of Jumping Creek (south of site JCV14) and grassed areas at both creek confluences. By comparison, sites were found to cluster on ridge crests, spurs and knolls as well as alluvial terraces and gentle footslopes. Slope gradient was found to be a primary locational determinant, with the majority of sites occurring on gradients of less than 3-5°. Occupation was also noted to be slightly more intense in areas where shale does not outcrop and where water is nearby.

Following Boot and Heffernan (1989), Kuskie (1989) indicates that site densities are high at Jumping Creek when compared to the local area, even taking into account differences in

sampling and survey strategies, visibility and so on. However he also identifies a need for further investigations before quantitative statements are possible.

In 2003, 8ha around the Jumping Creek area were surveyed for rezoning by Navin Officer. The area surveyed overlapped in parts with that previously assessed by both Boot and Heffernan (1989) and Kuskie (1989). The Navin Officer study re-affirmed the results of these previous studies, relocating two out of three previously recorded sites in the study area (JC2 and JCV6) and identifying an additional two Aboriginal sites: JC21 and JC22 plus a PAD associated with site JCV6. Both new sites were artefact scatters.

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 indicated that these sites were not unique in the region and that their original significance assessment could be reduced in light of these newer finds.

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 57-2-683. This new location for artefacts recovered from sites JCR1, JCR2 and JC12/14 is within 100m of the proposed route of the Ellerton Dr extension.

The portion of the Ellerton Dr Extension that runs between Jumping Creek and environs and the intersection with the Old Cooma Rd runs along the northern boundary of the Gale Precinct. This portion of land is bordered to the south by Wickerslack Lane, to the east by the Queanbeyan River and to the west by Old Cooma Rd.

Gale Precinct was surveyed in 1990, by Navin Officer, and resulted in the identification of eight low density open artefact scatters, three isolated finds and a possible scarred tree, with assemblages primarily manufactured from chert, fine grained volcanics, quartz and silcrete. All sites (with the exception of the scarred tree) were located on the crests of main ridgelines with larger scatters on or adjacent to the main ridge and smaller sites located on spur lines. These locations are argued to indicate the use of ridges as access

routes through the area. None of these sites occur within 100m of the proposed road corridor.

Finally, a number of surveys have been previously carried out within the area of the Old Cooma Rd, where the proposed route of the Ellerton Dr extension terminates. A 1993 survey of the CSR Ready Mix Quarry along Cooma Rd and to the southwest of the current study area failed to identify any archaeological sites, despite excellent survey coverage.

A survey for a 16ha subdivision along the Old Cooma Rd was undertaken by AASC (2001) and resulted in the identification of a single isolated find and a small open artefact scatter. Due to the high levels of visibility in the area and the relatively steep terrain though unsuitable for occupation across the study area, the remainder of the study area was assessed as being of low archaeological sensitivity.

Between 2001 and 2002 approximately 7.5km of the Old Cooma Rd was surveyed in two sections (Saunders 2001, 2002). Only a single isolated find was identified, on low gradient basal slopes adjacent to a drainage line. Two potential archaeological deposits were also identified on the flats and basal slopes adjacent to Jerrabomberra and Guises Creeks.

In 2009 Navin Officer undertook a survey of a proposed realignment of the Old Cooma Rd. During the survey five aboriginal sites were identified including three isolated finds and two artefact scatters (OCR1-5). However none of these sites occur within 100m of the proposed Ellerton Dr extension.

Extending just beyond the current study area to the west and connecting with the proposed Ellerton Dr extension where it meets with Old Cooma Rd, Dearling (2007) undertook a recent survey for the Edwin Land Parkway. During the course of the study a total of five Aboriginal sites were identified but all occurred in areas of high disturbance with little to no remaining soil depth. Two of the sites identified occur within 200m of the proposed route of the Ellerton Dr extension (Sites ELP4 and ELP5).

4.4 Local Aboriginal Culture – Ethnohistorical Evidence

Ethnohistory involves the use of historical literature as a means of building a model of how past societies interacted, through the use of ethnographic analogies. Two types of ethnoarchaeological analogies exist: direct historical analogy in which continuity is demonstrable between prehistoric and historic times, and general comparative analogy which works on a principle of methodological uniformitarianism to enable cross-cultural comparisons to be made (Collins 2000). In the Queanbeyan area, and indeed in most areas throughout the country, only the latter form of analogy can be validly applied, as hunter-gatherer lifestyle did not survive the arrival of Europeans in the early 19th century (Kuskie 1989). While the limitations of ethnographic sources must be recognised, these sources

can provide valuable insights into areas for which archaeological evidence is often non-existent or very rare.

Flood (1980) identified three types of ethnographic accounts:

- 1) first hand eyewitness accounts made at the time of initial contact between Aboriginal and European people;
- 2) first hand observations made at a later stage when Aboriginal society had been in contact with European society and subject to associated changes;
- 3) second hand or generalised accounts of Aboriginal life.

The available ethnohistoric evidence for the Queanbeyan region is discussed below.

4.4.1 Ethnohistoric Overview

The following provides a brief overview of the nature of pre-contact Aboriginal groupings, Aboriginal concepts of land ownership, and the relationship of both these to pre-contact Aboriginal land use in Australia. The purpose is to establish a basic framework of understanding regarding Aboriginal social organisation, within which the archaeology of the study area may be viewed. Such an understanding is an essential prerequisite to any archaeological research analysing the relationship between Aboriginal people and their environment.

The model of Aboriginal society being divided into a series of tribes, based on Tindale's 1974 publication is now generally considered to be defunct. The tribe is described by the early ethnographers as having rights over a defined tract of land, that included control over entry to people from outside and the right to hunt and extract resources from within the bounds of that area (Keen 2010:46). Several researchers have argued that the concept of a tribe does not account for the complexities of social interaction and organisation found in Aboriginal society (e.g., Keen 2004). The tribal model was used for most of the twentieth century by anthropologists to describe the social organisation of Aboriginal groups and how this related to land ownership. There has been a shift to attempts to describe Aboriginal society as multi layered and to explore interconnected relationships that operated within broad social groups.

In Australia the band is generally considered by anthropologists as the basic social and economic unit in pre-contact Australian Aboriginal society (Service 1966, Peterson 1976). The band is described as a small scale population, comprised of between two to six extended family units, or about 14 – 33 people, which together cooperate in the food quest (Service 1966; Keen 2004:106). The composition of this group (in terms of numbers) was not rigid; group size fluctuated in response to factors such as the availability of resources and visiting kin (Peterson 1975).

Individual bands are seen to occupy and exploit a specific range (Service 1966). The concept of a band's 'range' is not easily defined, and is therefore somewhat problematical to delineate. The ideal method of defining range would be to identify the outermost points of an area used by a group in order to demonstrate the total area, or range, in which that band operated. Yet, as Peterson (1986) points out, the kind of evidence needed to achieve this, (details of daily movements over several years) is not available for any group within Australia. Nor is such evidence likely to be discernible in the archaeological record. The practical alternative, both from an archaeological and an anthropological perspective, is to identify the base camps used over a period of time by a group. This provides a rough equivalent of a band's "home range".

4.4.2 Environmental Determinants of Social Organisation

Ecology is, according to Peterson (2008:186) a 'crucial variable' when assessing estate, range and domain. Range normally encompassed the estate, although there were exceptions to this (Peterson 2008:186). In cultures across the world it is impossible to separate natural landscapes from cultural landscapes (White 2000:188). From an archaeological perspective, it is equally impossible to discuss economy and subsistence without reference to the environment.

As Sutton (2008:170) explains, WEH Stanner explored the connectedness of economy, environment and spirituality over forty years ago. Stanner's famous paper 'Aboriginal territorial organisation: estate, range, domain and regime' published in *Oceania* in 1965 was a benchmark as it provided a new framework within which to define and discuss Aboriginal land ownership (Peterson 2008:185). This framework separated concepts of land ownership from the land that people actually used. Peterson (2008:185) suggests that this was a fundamental shift that has influenced the last forty years of anthropological debate.

In coastal and riverine environments where a higher population density could be supported compared to desert environments, people could lead more sedentary lives (Keen 2004:103). In these situations the social organisation of neighbouring groups could become more individualised; whereas in more arid climates people relied on being able to traverse vast tracts of land to access food and water, requiring closer social relations with neighbouring people (Keen 2004:103).

This argument reflects Louis Binford's model of 'foragers' and 'collector' societies. Foragers are highly mobile groups that move regularly and as a whole to new locations in order to exploit resources. In contrast, collector societies may move less often but rely on individual members of a society venturing out beyond the camp site location in order to provide the group with resources to continue residing at the location (Keen 2004:104). Keen (2004:104) suggests that most Australian Aboriginal societies fall within Binford's

‘collectors’ model – forming home bases and voyaging out from these bases to exploit resources from the surrounding area, which could be very large.

It was economically vital for Aboriginal people to be organised into bands, as this made groups more effective at surviving. Subsistence becomes more efficient and reliable if people are organised into groups that are larger than the nuclear family. This increases the number of ‘producers’ (people who can actively provide food for a group) and acts as a buffer against the sickness, injury or death of any one individual (Keen 2004:105). However, these groups will never become too large, as increased numbers reduce the mobility of the band, as well as potentially leading to broader social disintegration (Keen 2004:106).

The range of a band had to be capable of providing for the survival of the group for much of the year. Keen (2004) takes an economic view of range and presents a case for the range of a group to be determined by access to preferred food resources. As Keen argues, availability of foods, food preferences, production techniques and methods of transport all affect the means by which Aboriginal people across Australia were able to access food resources at varying times of the year. These factors therefore greatly affected mobility; groups had to be able to mobilise and move to where the preferred, available and accessible foods were located (Keen 2004:23).

Keen (2004:126) suggests that seasonal mobility of a particular groups is largely influence by rainfall. In Gippsland where there are clearly defined seasons, but steady year round rainfall people operated within a broad seasonal migration pattern. However, in the Western desert where rainfall was much less reliable, there was a weaker pattern of seasonal movement. Regular droughts brought on by the El Nino cycles and other more haphazard climatic events all influenced the seasonal movement based on food resources that Aboriginal people required (Keen 2004:79). This affected issues of range, ceremony and interactions with neighbouring groups (Keen 2004:79).

The factors that influence selection of a ‘home base’ are varied and illustrate the nature of pre-contact Aboriginal societies. Access to fresh water is probably the most fundamental requirement, and will be common to all home base sites. Distance to food resources is the next consideration. As Keen (2004:104) notes it may be that home sites are better located adjacent to less transportable resources, rather than in areas where there is the highest abundance of food items. The distance that an individual collector can travel within a single day forms an important scope of the range of the home base, and therefore the size of the resource pool available. Keen (2004:104) suggests that in hunter-gatherer societies around the world, a distance of 20-30km is considered the maximum foraging distance from a home base. People could then establish smaller temporary camps away from the central home site to enable longer foraging journeys (Keen 2004:105).

Despite the difficulties faced in defining ranges, Peterson (1986) believes there is good evidence for supposing that bands are localised and generally have bounded and exclusive ranges. The most significant evidence is ethnographic accounts recording the elaborate rites of entry accorded to visitors when entering a bands range (see Peterson 1986). However, there is no evidence to suggest that members of a band actively defended the boundaries of these ranges (Peterson 1986). Rather, it appears that the boundaries of a group's 'range' were not necessarily clearly demarcated lines. Trigger describes these overlapping boundaries as 'zones of transition' (Trigger 2010:155).

4.4.3 Aspects of Aboriginal Social Organisation

Individual bands or clans were by no means a social or cultural isolate, but rather interacted with each other in a variety of ways. Typically, these interactions involved visitations, marriage, ceremonies and trade. Through these interactions, links were established or re-affirmed between neighbouring bands. The result was the formation of a cluster of bands, wherein there was some sense of collective identity, often expressed in terms of possessing a common and distinctive language (White & Cane 1986). Most people in pre-contact Aboriginal society were multi-lingual and marriages outside of the language group were common (Keen 2004:134). Indeed, within some totemic groups several languages were spoken (Keen 2004:135).

Linguistic inheritance could be multi-layered. Trigger (1992:104) records how in some northern Australian societies most people were (a) multi-lingual and (b) adopted a primary linguistic label based on whether their present circumstances were aligned. This implies that linguistic affiliation was perhaps a less formal and more adaptive social mechanism. Trigger (1992:105) suggests that this undermines the concept of linguistic groups, which was a characteristic often used in the past to define tribal groups.

Similarly, Keen argues that a shared language did not necessarily indicate shared cosmic beliefs or social customs, nor did language or dialect clearly define social groups (Keen 2004:135). Rather, Keen suggests that broad social groups tended to define themselves more by location, with reference to the type of environment (coastal, hinterland etc) or direction (northerners or southerners) (Keen 2004:135). Groups were also sometimes named after and therefore defined by, the name of the leader or a prominent person in that community (Keen 2004:135). Blundell (2003) discusses how the Wandjina rock art sites of the Kimberly formed the cultural and cosmic centres for the 'little countries' or 'dambina' which correlate with concept of an estate as used by anthropologists (Blundell 2003:162).

Keen (2004:170) presents a model of the complexities of Aboriginal society, where an individual's identity depended largely on context. In some situations, Keen argues, language was the defining factor, in another the broad region to which you claimed affinity, and in yet other circumstances it may totemic identity that was important.

Interestingly, Keen (2004:170) suggests that identity was 'most clearly defined' in areas rich in resources, such as coastal zones, while people in more arid environments had less strongly applied rules governing identity. This reflects the imperative for desert people to be on solid relationships with their neighbours. The following section discusses issues of Aboriginal connection to the land in more detail.

4.4.4 Concepts of Aboriginal Land Ownership

The band was in essence a land using group, but not a land owning group. Land ownership was vested in 'the clan' or 'corporate group' which is defined as a broad group of people that shared social characteristics, and was often tied to having rights over certain tracts of land, known as an 'estate' (Keen 2004:134; Peterson 1986).

It is uncertain whether clans within eastern Australia were strictly matrilineal or patrilineal (as is suggested in other parts of Australia), or whether membership was determined more on the basis of place of birth (White and Cane 1986). Keen (2004:136) argues that across Australia it was common for totems to be partifilial, where a child took their father's totem, and that this was strongly tied to land ownership. The totem was an important feature of Aboriginal society and was used to define individuals, small groups and larger groups (Keen 2004:135). This was by no means the only form of land connection across Australia; in some parts a person's place of birth determined which country they were tied to (Keen 2004:137).

Where matrifilial systems operated (where a totem was passed from mother to child) it tended to cause people of the same totemic identity to be dispersed among several land based groups. In this way, matrifilial relations become important when determining marriage and other social ceremonies, but were not generally connected to land ownership (Keen 2004:137).

The system of patrifilial transition of land ownership concepts is reflected in Peterson's 1811 account of Bennelong's sense of ownership of Goat Island (Keen 2010:45). Patterson wrote that Bennelong had 'inherited' Goat Island from his father, and that he in turn had the right to pass it on to his companion By-gone (Keen 2010:45). This is supported by Eyre's 1845 observations about the hereditary transmission of Aboriginal land ownership (Keen 2010:46).

Ancestral law was the defining principle that controlled access to country and landmarks, including water sources (Keen 2004:299). Tied to this notion are concepts of cosmology, religion and the ongoing influence of the ancestors (Keen 2004:303). Keen suggests that: 'ancestral significance integrated country, resources and technologies into the all-encompassing framework of ancestral law, not only as a mode of control, but as a way of being.' (Keen 2004:303). Myers has also argued that ownership of territory was largely

vested in knowledge of the 'stories, objects, and ritual associated with the mythological ancestors of the dreaming at a particular place (in Peterson 2008:192).

4.4.5 Ethnohistorical Information for the Queanbeyan Region

Regretably there is very little in the way of reliable direct observations of Aboriginal people by early travelers, explorers and settlers for the Queanbeyan region. Instead, the majority of ethnohistorical data for the region comprises 'the reminiscences of long-time residents of the district in their later years' (Kuskie 1989:10). Consequently, the reliability of these records is compromised by factors such as personal bias, the length of time between the writer's experience and time of writing, ethnocentric views and the changes already effecting Aboriginal society as a consequence of European contact. Nevertheless, these sources do provide information regarding population size, distribution and movement, material culture, subsistence behaviour and interactions with Europeans.

Reconstructions of clan boundaries based on ethnohistorical and linguistical evidence (Flood 1980) indicate that three Aboriginal 'clans' occupied the Queanbeyan area: the Ngunawal, Ngarigo and Walgalu. Groups were delineated by physical landscape boundaries, such as water courses/mountain ranges or particular varieties of vegetation (BIOSIS 2007).

The Ngunawal are depicted as occupying the area from Queanbeyan to Goulbourn and west to Tumut and Gundagai. The Walgu are thought to have occupied the Namadgi region to the southwest of Queanbeyan and the Ngarigo occupied the lands to the south of Queanbeyan and on to the Monaro Tablelands. Given the fluidity of Aboriginal clan boundaries it is likely that much of Queanbeyan was occupied by all three groups at various times over the last several thousand years.

Gatherings of numbers of small groups such as 'bands' occurred for ceremonial reasons or to exploit seasonally available resources. These gatherings could number up to many hundreds of individuals; the gathering of up to 500 individuals in the highlands near Uriarra in the ACT occurred annually to exploit the seasonal availability of Bogong Moths.

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 Corroborre' 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).