



Molonglo Stage 3 Future Urban Release: Sub Surface testing report and further studies

Prepared for Environment and Sustainable Development Directorate

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Abbreviations

AHC	Australian Heritage Council
CHA	Cultural Heritage Assessment
CHL	Commonwealth Heritage List
CMP	Conservation Management Plan
DSewPac	Department of Sustainability, Environment, Water, Population and Community
ESDD	Environment and Sustainable Development Directorate
GPS	Global Positioning System
GSV	Ground surface visibility
ICOMOS	International Council on Monuments and Sites
MGA	Map Grid of Australia – unless otherwise specified all coordinates are in MGA
NHL	National Heritage List
NNTT	National Native Title Tribunal
PAD	Potential Archaeological Deposit
RAO	Representative Aboriginal Organisation
UDP	Unanticipated Discovery Plan

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Summary

This report details the findings of the sub surface testing and further detailed studies undertaken as recommended by the Biosis 2012 Molonglo Stage 3 Future Residential development Cultural Heritage Assessment (CHA) report. The current report is to be read in conjunction with the original 2012 CHA report. Information contained in the 2012 CHA report in regards to project area background, surface sites location and environmental context will not be restated in this further investigations report.

On completion of the CHA (2012) further components were recommended as requiring completion to provide a clear picture of the cultural heritage values that may be present within the Project Area. These recommendations were:

- A surface collection salvage program was to be completed for the identified Aboriginal cultural heritage sites that occur with the Project Area. These sites consist of five (5) isolated finds and twenty-eight (28) surface scatters.
- The historical heritage site Kallenia Rivers Woolshed (MVSH1) meets criteria for listing to the ACT Heritage Register. Detailed historical research and fabric analysis of the structure should be undertaken to determine if nomination to the ACT Heritage Register is warranted and a site specific Conservation Management Plan (CMP) developed for the site if required;
- During the desktop stage of the CHA, three (3) areas of moderate potential were identified across the entire Project Area based on landscape analysis, associated with Deep Creek and the Molonglo River. Following the pedestrian field survey, areas of sensitivity were redefined based on landform condition and presence of Aboriginal archaeological sites. Based on the findings, nine (9) areas of high potential were defined that were recommended for a program of targeted sub surface testing to determine the presence, extent and significance of any sub surface deposits. The methodology for excavation should include a series of hand excavated test pits spaced on a 50 m grid across the defined areas of potential. As part of the methodology for the examination of these areas, eight (8) areas of low potential were also to be excavated to test the veracity of the site predictive model.

In addition to the above recommendations, an area was identified by Aboriginal representatives during the field survey as possessing cultural significance within the Project Area. Further consultation was necessary to determine the cultural values and appropriate management of this area. This consultation has been undertaken and is reported in Section 5 of this document.

The sub surface testing and further studies were undertaken during November and December in 2012 and resulted in the following:

- Surface collection and analysis of 335 lithic artefacts from all 33 recorded sites
- The Kallenia woolshed is considered to possess high significance based on the historical research undertaken for the site.
- Nine areas of Potential Archaeological Deposits (PAD) and eight areas of low potential were excavated. Sub surface deposits were not found in either the area of PADs or the low potential area. Based on the findings, PAD areas 1 to 5 and 7 and 8 have been reallocated to low potential and PAD 6 as moderate potential.
- Consultation with the Aboriginal community resulted in a finding of high cultural significance for the identified cultural area. Appropriate management for this area would consist of retaining the current use of the area with minimal disturbance.

Management recommendations for the Project Area consist of:

- All identified Aboriginal Cultural Heritage sites located within the Project Area have been the subject of archaeological salvage. There are no further requirements for these sites (MVS2 - MVS33);
- Areas of PAD (1,2,3,4,5,7,8,9) within the Project Area have been reallocated to low potential and their designation of PAD should be removed. PAD 6 has been the subject of sub surface testing resulting in a moderate designation. PAD 6 does not present a constraint on the project and no further investigation is required;
- Consultation with the Aboriginal community has identified an area that requires additional management considerations due to cultural values. This area poses an area of constraint on the development and impacts to this area should be avoided;
 - In the event that impacts to the cultural area can not be avoided advice should be sought from the ACT Heritage Unit as to an appropriate management strategy for the impacts;
 - Consultation with Aboriginal community will need to be undertaken if the cultural area is to be impacted;
 - The current use (pastoral agistment) of the cultural area is compatible with its heritage values.
- Kallenia Woolshed meets the criteria for listing to the ACT Heritage Register. A site specific CMP should be developed for the site to guide its management until a formal nomination to the ACT Heritage Register is prepared for the ACT Heritage Council to assess and consider. In the event that such a nomination is rejected by the ACT Heritage Council then there are no further heritage constraints for the site. The nomination should be prepared as soon as possible to provide certainty as to the future status of this structure;
- If previously unidentified archaeological artefacts or sites are located during the course of development within the Project Area, the process outlined in the Unanticipated Discovery Plan (UDP) should be followed ; and
- Copies of this report should be submitted to:
 - ACT Heritage Council (via the ACT Heritage Unit)
 - Representative Aboriginal Organisations (RAO).

1 Introduction

1.1 Project background

Biosis Research Pty Ltd was engaged by the ACT Government, Environment and Sustainable Development Directorate to undertake an Aboriginal and European Cultural Heritage Assessment of the proposed Stage 3 Molonglo Valley Future Urban Releases (Figure 1 and 2) in 2012. This area generally lies on the north side of the Molonglo River Corridor and to the south of William Hovell Drive, with Coppins Crossing Road running within the Project Area.

The primary aim of this 2012 Cultural Heritage Assessment (CHA) was to build upon previous work undertaken in the vicinity of the Project Area to inform future planning by determining the presence of cultural heritage values within the proposed development, and the impacts to those identified cultural heritage values. This investigation provided an assessment of heritage significance in the Molonglo Valley Stage 3 area and resulted in the development of a CMP, detailing management recommendations for the protection of heritage values.

This report details the findings of the management recommendations for the Project Area which consisted of:

- Salvage collection of identified surface Aboriginal Sites;
- The Historical heritage site Kallenia Rivers Woolshed (MVSH1) meets criteria for listing to the ACT Heritage Register. Detailed historical research and fabric analysis of the structure should be undertaken to determine if nomination to the ACT Heritage Register is warranted and a site specific CMP developed for the site if required;
- During the desktop stage of the CHA, three (3) areas of moderate potential were identified across the entire Project Area based on landscape analysis, associated with Deep Creek and the Molonglo River. Following the pedestrian field survey, areas of sensitivity were redefined based on landform condition and presence of Aboriginal archaeological sites. Based on the findings,, nine (9) areas of high potential were defined that were recommended for a program of targeted sub surface testing to determine the presence, extent and significance of any sub surface deposits. The methodology for excavation should include a series of hand excavated test pits spaced on a 50 m grid across the defined areas of potential. As part of the methodology for the examination of these areas, eight (8) areas of low potential were also to be excavated to test the veracity of the site predictive model.
- Further community consultation in regards to an area of identified Aboriginal cultural significance is required.

This report should be read in conjunction with the Biosis 2012 CHA report as initial background and assessment information contained in that report will not be repeated within this document.

1.2 Consultation

1.2.1 Statutory

During the course of this project consultation with Mr Tom Percival of the Environment and Sustainable Development Directorate (ESDD) and Ms Lisa Chaston of ACT Heritage has been ongoing.

1.2.2 Aboriginal

Aboriginal consultation for this project has been undertaken in compliance with ACT Heritage recommendations. The four Representative Aboriginal Organisations (RAOs) registered with ACT Heritage were contacted. They are:

- the Buru Ngunawal Aboriginal Corporation
- King Brown's Tribal Group
- the Little Gudgenby River Tribal Council
- the Ngarigu Currawong Clan

All of the above RAOs were consulted during this project.

1.3 Project Methodology

The project methodology was designed to fulfil the further investigations recommended by the CHA report (Biosis 2012). The methodology is split into separate stages for each of the recommended tasks.

Task 1 – Collection of Surface Aboriginal Sites

A number of Aboriginal surface sites consisting of single isolated finds or artefact scatters were identified within the Project Area during the 2012 field survey season (Biosis 2012). Using this field data, recorded GPS locations and site descriptions, these sites will be revisited and the area examined. Surface artefacts collected will be awarded an individual nominer which will be recorded against the GPS location. This information will be mapped to show the distribution of artefacts at each site. Each artefact will then be analysed recording its technological attributes and material.

Task 2 – Assessment of Woolshed

The assessment of the Kallenia Rivers Woolshed consists of background research and a site visit to record and analyse the fabric of the Woolshed and to assess its significance.

Background Research

A search was undertaken of the ACT Heritage Register and copies of relevant reports requested from the ACT Heritage Unit to ensure that all background documentation on the previously recorded Woolshed and pastoral sites in the region was included in the CHA. Information as to status, state of conservation and significance for sites within this same classification was collated for reference and summarised.

The ACT National Trust Register and the Register of the National Estate were also searched for listings that related to the pastoral classification within the ACT. Relevant copies of historical records and maps for the Project Area were consulted, and the current Project Area plotted against them.

Field Work

After collation of all relevant documentation, a site visit was undertaken by Gary Vines to record and assess the standing fabric of the Woolshed Complex to assess its archaeological and conservation significance. This analysis consisted of:

- Detailed building plans;
- Dating of newspaper fragments adhering to the interior of the Woolshed; and
- Dating of fixtures, design elements and materials.

Task 3 – Sub Surface testing of areas containing high and low potential

As part of the CMP devised for the area based on the CHA report (Biosis 2012), a detailed sub surface testing methodology was developed and approved by the ACT Heritage Council. This methodology called for the investigation of the nine areas of high potential (designated PADS) and eight areas of low potential to test the robustness of the site predictive model.

Any artefacts recovered during the sub surface testing would be subject to lithic analysis.

Task 4 – Consultation with Aboriginal Community

During the 2012 field surveys an area of cultural significance was identified by the Aboriginal field representatives. An onsite meeting was organised with the RAOs to discuss significance and management options for the area's inclusion and ongoing management within the proposed development.

2 Task 1 – Salvage Collection of Aboriginal Sites

In accordance with the approved CMP for the project, surface collection was undertaken for the Aboriginal sites to mitigate their destruction by the proposed development. The sites were originally identified as part of the field surveys undertaken in May 2012. The dates of collection were November 2012. In the intervening period, natural processes such as displacement by water and the regrowth of vegetation continued to impact the sites, changing their composition by either obscuring previously recorded artefacts or exposing others. This was most noticeable for sites that were located in areas of high pedestrian, equestrian, cycle and vehicle traffic. The location of the Project Area are shown in Figures 1 and 2.

Thirty three (33) Aboriginal sites were identified during the survey (see Figure 3). The recovered artefacts were the subject of analysis. The findings of the analysis and details of individual artefacts and site composition are presented in Appendix 2. Individual site data compilation and analysis was undertaken for larger sites which contained enough artefacts to provide a data set. The results for these larger sites are presented in the following sections under the individual site name.

In the discussion Section 2.7 a comparative analysis has been undertaken for:

- the recovered artefacts on a site basis; and,
- the assemblage composition as a whole for the Project Area.

The original descriptions of the sites have been taken from the CHA report (Biosis 2012) and are presented below. The results of the surface collection for each site are described under separate sections that are consistent with the division of the Project area utilised in the original CHA report (Biosis 2012).

2.1 Section 1: Kama Woodlands to Coppins Crossing Road

Section 1 is bounded by the Molonglo River to the south, William Hovell Drive to the north, Coppins Crossing Road to the east and the boundary of the Kama Woodlands to the west. The land is mainly used for pastoral activities with the exception of the sewerage treatment works and access tracks which are located on the southern boundary along the banks of the Molonglo River. At the northwestern corner of this area close to the Kama Woodlands a possible scarred tree was identified by the RAOs and recorded in the Cultural Heirtae Assessment Report (Biosis 2012) as MVS1. This scarring does not meet any of the criteria for cultural scarring (Long 1995) and has no further requirements. MVS1 therefore does not feature in this Stage 2 works report.

The identified sites from the Cultural Heritage Assessment that are subject to further works outlined in the stage 2 program area listed below with the results of the salvage program.

Site Name: MVS2

This site is situated in a farm paddock situated on the western side of Coppins Crossing Road in the northern sector of the current Project Area. The site consists of a silcrete flaked piece that was previously identified on a vehicle impact track running east to west. This area at the time of surface collection was vegetated with long grass growth and the site could not be relocated.

2.2 Section 2: Coppins Crossing Road to Stromlo Pine Plantation

Section 2 is bounded by Coppins Crossing Road to the west, William Hovell Drive to the north, the Molonglo River to the south and the boundary fence of the current pastoral lease to the east.

Site Name: MVS3

This artefact scatter is situated on a vehicle access road that runs northeast to southwest through the wide and relatively flat grasslands on the eastern side of Coppins Crossing Road and is north east of Kallenia Rivers Homestead and Woolshed. At the time of original recording the site consisted of six artefacts distributed across an area of around 50 metres in length. The majority of these artefacts were chert flakes or cores.

At the time of collection 23 artefacts were recovered. The composition of the site by artefact type and raw material is shown in the following Tables. The surface distribution of the artefacts at the site is shown in Figure 4.

Table 1: Site MVS3 Artefact Types

Artefact Type	Number	Percentage
Flake	9	39%
Proximal Flake	5	22%
Distal Flake	2	9%
Core	6	26%
Angular Fragment	1	4%

Table 2: Site MVS3 Lithic Material Composition

Material Type	Number	Percentage
Chert	10	43%
Silcrete	4	17%
Quartz	6	26%
Basalt	3	13%

The assemblage primarily consisted of unmodified chert and quartz flakes. Only nine artefacts exhibited retouch, generally along their lateral and distal margins. No formal tool types as defined in the Australian Small Tool Tradition (ie backed blades, bondi points, thumbnail scrapers) were identified.

2.3 Section 3: Stromlo Pine Plantation

Section 3 is located to the south of Section 2 and is located in the area of the Stromlo pine plantations which were destroyed in the Canberra Bushfires of 2002-2003.

No sites were located in Section 3 of the Project Area.

2.4 Section 4: Stromlo Pine Plantations to Coppins Corner

Section 4 continues to the southeast of Section 3 with the same general conditions of visibility and disturbance as this area was also part of the Stromlo pine plantation.

Site Name: MVS4

MVS4 is located on the eastern side of Coppins Crossing and south of the main vehicle access road that runs east to west across the Project Area. The site consists of a small scatter of two artefacts in an exposure caused by water drainage works. The exposure is around 1 m x 15 m in size with relatively high ground surface visibility.

At the time of collection, the size of the exposure had markedly decreased with GSV estimated at 50% due to vegetation growth. Two artefacts were recovered, a quartz flake and a chert core as originally recorded. The locations are shown on Figure 5.

Site Name: MVS5

Site MVS5 is situated along the right side of an access track that runs north to south through the pine forest area. It consists of an isolated find in an area of exposure to the left side of the small creek, which appears to be a stock impact trail or Kangaroo crossing. The area of exposure was small and narrow with low visibility in the surrounds due to dense blackberry growth. This artefact was not relocated during the surface collection, despite a thorough search at the location by the original recorder.

Site Name: MVS6

This artefact scatter is centred in a gateway that provides access into the old pine plantation. The exposure occurs in two separate sections: the first is a circular area to the right of the gateway on which two artefacts were identified (25 m by 10 m approximately); the second is a narrow linear exposure no more than a foot wide that follows the alignment of an underground pipeline on which a single artefact was identified. Three artefacts were recorded at MVS6 during the initial assessment. At the time of collection, four artefacts were identified, consisting of 2 flakes, one core and angular fragments. Three of the artefacts comprised chert (Appendix 2). The location of the artefacts is shown in Figure 6.

Site Name: MVS7

MVS7 is located on the northern side of an old graded access track in an area of pine forest. When originally recorded, the exposure was estimated at 60% ground surface visibility, with a background visibility off the track of less than 10% due to grass and blackberry. A single grey chert flaked piece was recorded. At the time of collection, a further four artefacts were identified at this site, manufactured from pink chert, quartz and tuff. The location of the artefacts is shown in Figure 7.

Site Name: MVS8

Site MVS8 consists of an isolated find of chert. The chert flake fragment measured 24 x 26 x 6 mm and was located on the edge of the graded fire trail but was not relocated during surface collection. An additional three artefacts (flakes), not previously recorded, were identified at this location. Visibility was high along the fire trail but off the fire trail blackberry and grass obscured ground surface visibility and exposures were limited. The locations of the recovered artefacts are shown in Figure 8.

2.5 Section 5: Coppins Corner to Southwell Corner

Section 5 continues south from Section 4, still within the old Stromlo pine plantations. Section 5 has a larger area of gentle river flats fronting the Molonglo River (which is still steep to access in some parts) and covers Misery Hill and Misery Point. The area of Misery Point has not been disturbed by the pine plantation and is grassed with access tracks and steep slopes to the Molonglo River.

Site Name: MVS9

This site is situated in the far northeast end of the pine forest, adjacent to the National Arboretum, along a track that runs north to south. It comprises an isolated find, a chert flake, 17 x 20 x 2 mm, with retouch flake scars along the right lateral margin and some cortex present. This artefact was not relocated in the surface collection. Overall, the ground surface visibility of the area was poor, less than 5%, due to high and dense vegetation including grass and blackberries, many of which stood in excess of one metre in height. Visibility along the track was generally high, around 90%.

Site Name: MVS10

MVS10 is a small artefact scatter, comprising two flakes that were not relocated at the time of the surface collection. The artefacts were identified in a 40 m x 10 m exposure situated mid slope, north of the access road that runs north to south on the western edge of the pine forest. It is also situated adjacent to drainage works. Vegetation growth had intruded into this area of exposure obscuring ground surfaces and decreasing both the size of the exposure and the visibility within it.

Site Name: MVS11

This site is located on a fire trail, just beyond a tower to the northwest. The site comprises a small scatter of two artefacts, which were not relocated in the surface collection. Two chert flakes, not recorded previously at this site, were located. The locations of the recovered artefacts are shown in Figure 9.

Site Name: MVS12

Site MVS12 consists of a small scatter of two artefacts, situated in a 5 m x 2 m exposure under pine trees within the plantation area. Visibility at the site at the time of surface collection was fair, at 65%. General visibility in the area was less, at 5%. The original two artefacts plus an additional artefact were relocated at this site during the surface collection, one chert flake and one silcrete flake, and a possible river cobble used as an anvil.

Along a length of the adjacent fire trail an additional five artefacts were located. These artefacts were dispersed for a length of approximately 5 m along the fire trail and consisted of flakes and one core. Tuff was the most common material. The locations of the artefacts are shown on Figure 10.

Site Name: MVS13

The site is situated on the eastern side of the Molonglo River, in the north of Section 5, within the forest plantation area. The site was identified on a fire trail running northeast to southwest, parallel with the river. Along the road ground surface visibility was high at 90%, while visibility within the plantation area was poor, less than 10% due to high and dense vegetation, including trees, grass and blackberries. Eighteen (18) artefacts were visible on the surface at this location at the time of the original survey. Twenty - nine (29) artefacts were relocated in the surface collection, most of which were flakes or flake fragments made from quartz or silcrete. The breakdown of these artefacts by type and raw material are tabled below. A fragment of white ceramic was also identified at this site which is shown on Figure 11 along with the locations of the artefacts.

Table 3: Site MVS13 Artefact Type

Artefact Type	Number	Percentage
Flake	7	24%
Medial Flake	3	10%
Proximal Flake	6	21%
Distal Flake	6	21%
Bipolar Flake	3	10%
Flaked piece	1	3%
Angular Fragment	2	7%
Blade	1	3%

Table 4: Site MVS13 Material Composition

Artefact Type	Number	Percentage
Chert	10	34%
Silcrete	7	24%
Quartz	8	28%
Basalt	2	7%
Tuff	2	7%

The site assemblage primarily consisted of unmodified flakes constructed on quartz and silcrete. Within the flake category three quartz flakes exhibited bipolar flaking characteristics with crushed platforms and terminations. In addition three formal tool types, a blade, a backed blade and a point were recovered from this site. These retouched tools were all constructed on silcrete.

Site Name: MVS14

Site MVS14 is located on a fire trail within the pine plantation area. The road runs east to west and is situated below Misery Hill on the western side. The site consists of a small artefact scatter. Three lithic artefacts were identified, of which two quartz flake fragments were relocated during the surface collection. Ground visibility was high along the fire trail estimated at 90% but off the fire trail the visibility was reduced by the pine trees and the blackberry which grows thickly under and between the trees. Artefact locations are shown on Figure 12.

Site Name: MVS15

This site is located along the western end of a peninsula shaped spur line, known as Misery Point, which juts out above the Molonglo River. This area is to the southwest of the pine forest plantation. In general, ground surface visibility was low, less than 5%, due to high and dense vegetation including grass and blackberries. There were limited exposures in this area due to a lack of previous disturbance, and those exposures present are a result of natural rock outcrops that occur across the steep, sharp drops to the Molonglo River. Access to the point from the Molonglo River or down to the Molonglo is not easy due to the topography. The site comprises a small scatter of four artefacts located along an access track, none of which were relocated in the surface collection.

Site Name: MVS16

Located within the south eastern section of the pine plantation area of Section 5 is Site MVS16 consisting of eight artefacts. The site is located on a fire trail, running east to west and extends from the upper slopes of a slight rise to the lower slopes. From this location, Black Mountain is visible to the north east. The ground surface visibility on the road was high at 90%, while alongside of it was poor, less than 10%.

Two of the original eight artefacts from this site were relocated in the surface collection consisting of quartz artefacts. Their locations are shown on Figure 13.

Site Name: MVS17

Site MVS17 consisted of two fragments of a single chert flake. These artefacts were not relocated during the surface collection. This site is situated within the central part of the plantation area on a fire trail that runs north to south. The artefact was recorded on the western edge of the trail, where ground surface visibility was high, at 90%. In contrast, visibility on both sides of the road was poor, less than 10%, due to high and dense vegetation, including grass and trees.

2.6 Section 6: Southwell Corner to Canberra National Arboretum

Section 6 is completely within the area of the Stromlo Pine Plantation. It is bounded by the Molonglo River to the south and west, by section 5 to the north and the Canberra National Arboretum to the east.

Site Name: MVS18

This site consists of a single grey chert core located on the side of an access road. Visibility at the time of original survey was high estimated at 80% with off road visibility at 10%. At the time of collection visibility had decreased to 60% on the road and less than 5% off-road. This artefact was not relocated during the salvage program.

Site Name: MVS19

The site is situated along a track running east to west, in the southern area of the pine plantation, along the mid slope area above Molonglo River. At the time of original recording the site comprised a large artefact scatter of more than 50 lithic artefacts, featuring flakes, cores and angular fragments of quartz, chert and silcrete. The scatter is approximately 300 m in length (east to west). At the time of collection ground surface visibility along the track was high, at 70%. In contrast, visibility on either side of the track is low, at less than 5%, due to dense vegetation, including trees, grass and blackberries and there are few exposures. It was considered probable that sub surface deposits are associated with this large surface scatter. This has been investigated as part of PAD 4. A total of 147 artefacts were recovered during the salvage program and the breakdown of artefact types and materials are shown in Table 5 and Table 6 following. Artefact locations are shown on Figure 14.

Table 5: Site MVS19 Artefact Type

Artefact Type	Number	Percentage
Flake	65	44%
Medial Flake	14	10%
Proximal Flake	35	24%
Distal Flake	9	6%
Cores	20	14%
Angular frag	4	3%

Table 6: Site MVS19 Material Composition

Artefact Type	Number	Percentage
Chert	87	59%
Silcrete	45	31%
Quartz	11	7%
Basalt	1	1%
Quartzite	3	2%

The assemblage consisted primarily of flakes constructed on chert with 4 formal tools identified. These were a chert blade, chert microblade, silcrete backed artefact and a broken silcrete point. No tuff was identified in the assemblage, however quartzite was present which is unusual for the Project Area.

Site Name: MVS20

The site was recorded on a fire trail, running east to west that provides access through the central area of the pine forest plantation. In contrast to access roads in the northern zone of the plantation forest, the trail is located within fine sandy sediment. Ground surface visibility along the road at the time of collection was moderate at 50% due to the high content of fine dust that moved and coated the ground surface. The site originally consisted of ten (10) artefacts. None of the original artefacts were relocated but a further five were identified at this location. Artefact locations are shown on Figure 15.

Site Name: MVS21

This site was recorded along a fire trail running north to south along the Molonglo river frontage, located in the midslopes. Soils in the area consist of a fine sandy matrix. This site is situated on the fire trail and within bush to the east in two discrete scatters. A total of 17 artefacts were originally located within this area but at the time of collection not a single artefact in this area could be relocated. A cover of dust has fallen over the site since the time of original recording but no vegetation growth has occurred in this area with high levels of exposures and visibilities. The original recorders were on site and returned to the locations, but could not relocate the artefacts.

Site Name: MVS22

This surface scatter at the time of original recording consisted of 50+ artefacts. The site was located to the south of MVS21 and is located along the fire trail that turns with the bend of the Molonglo River where the water course turns eastwards. The fire trail at this location runs in an east to west direction. Access to the river frontage here is gently sloping. Visibility away from the fire trail and between the trail and the river frontage was less than 5% due to vegetation and tree growth. The lower reaches have also been affected by flood scouring. No sites were located along the river frontage. In general, the area consists of fine sandy sediment and river pebbles.

At the time of salvage collection 51 artefacts were recovered from this site. The breakdown of the artefacts and the material types represented are presented in Table 7 and Table 8 following and the artefact locations are shown on Figure 16.

Table 7: Site MVS22 Artefact Types

Artefact Type	Number	Percentage
Flake	23	43%
Medial Flake	3	6%
Proximal Flake	10	20%
Distal Flake	5	10%
Cores	7	14%
Angular Frag	2	4%
Hammerstone	1	2%

Table 8: Site MVS22 Lithic Materials

Artefact Type	Number	Percentage
Chert	24	47%
Silcrete	11	22%
Quartz	16	31%

The assemblage is dominated by chert consisting of primary flakes. Retouch was noted on only a small proportion of the flakes, as was usewear, usually confined to the lateral margins. No formal tool types were identified from this site.

Site Name: MVS23

Located to the east of MVS22 this surface scatter consists of a dispersed artefact scatter along the fire trail running west to east consisting of five artefacts. At the time of original recording surface conditions along this track consisted of high visibility with adjoining areas to the fire trail being open and not containing pine regrowth. Surface exposures were limited and ground surface visibility off the track was low at 15%. Four artefacts were relocated at this site consisting of three quartz flakes and one silcrete flake. Artefact locations are shown on Figure 17.

Site Name: MVS24

Site MVS24 is located along a section of fire trail located midslope within the pine plantation area. The slope to the river drops steeply along the southern edge of the sites. The visibility along the fire trail was high at 90%, with low visibility at 10% away from the road exposure within the pines. Small areas of exposure did occur at the base of pine trees or where animal impact trails occurred. Eleven (11) artefacts were recorded at this location during the field survey and seven artefacts were relocated during the salvage program consisting of quartz and chert complete flakes and broken flakes. Artefact locations are shown on Figure 18.

Site Name: MVS25

MVS25 is situated on an access road that provides entry to the far eastern section of the current Project Area. From this trail, the Molonglo Stage 1 development, "Coombs", is visible. This site comprises a small scatter of eight (8) lithic artefacts dispersed across the upper slopes of the crest. At the time of salvage collection no artefacts were relocated at this site.

Site Name: MVS26

This site at the time of original recording consisted of a surface scatter of six (6) artefacts running north to south along an access road leading downslope to the Molonglo River. The gradient to the river in this section is gentle and would have provided easy access to the river frontage. As with the other sites in this section, visibility decreases when the exposure on the road is lost. During the salvage program five artefacts were relocated at this site consisting of two cores, one flaked piece and broken flakes. These artefacts were manufactured from chert and quartz. Artefact locations are shown on Figure 19.

Site Name: MVS27

The site is located south of site MVS26 along the same fire trail. At the time of original recording the visibility along this trail was high with a large area of continuous exposures. Three artefacts were originally recorded at this location. At the time of salvage collection the road was overgrown with grasses and blackberry incursions from the edges. Rain has also affected the visibility on the trail with removal of a large amount of sediment exposing the underlying gravels. No artefacts were relocated at this site for the salvage program.

Site Name: MVS28

This site is located on an east- west running fire tail that provides access to the central portion of the plantation. It is situated on the midslopes of a small rise. The site extends from just west of the junction with another fire trail, east until the track intersects with another fire trail. At the time of original recording three artefacts were located across the breadth of the road and extends into the verges. Visibility was high along the access road but along the road alignment where pine trees, branches, and blackberry were present, ground surface visibility was greatly reduced.

At the time of collection the vegetation had spread from the verges across the road alignment obscuring ground surface visibility. Despite a thorough search of the area no artefacts were relocated at this this site.

Site Name: MVS29

At the time of original recording the site consisted of a single artefact located in an area of exposure within the pine plantation at the base of a row of planted pines.

At the time of collection the original artefact was relocated and an additional artefact was also identified. Both of these artefacts are flakes manufactured from grey chert. Visibility was moderate at 50% at the time of collection with pine needles obscuring the ground surface. Artefact locations are shown on Figure 20.

Site Name: MVS30

Site MVS30 is located along a length of fire trail on the midslope area for a length of approximately 100 m. When originally recorded, visibility was high with the fire trail providing an area of continuous exposure with high visibility at 90%. Over 50 artefacts were located at this site.

At the time of salvage collection blackberry had overgrown the verges completely and was intruding across the fire trails. The trail appeared to be heavily used for recreation by horses and cyclists. Visibility was estimate to have decreased to 30% with only occasional patches of exposure along the fire trail. Only 29 artefacts were located along this fire trail at the time of collection. The breakdown of artefact types and material is shown in Table 9 and Table 10 below. Artefact locations are shown on Figure 21.

Table 9: Site MVS30 Artefact Types

Artefact Type	Number	Percentage
Flake	20	69%
Proximal Flake	2	7%
Distal Flake	3	10%
Cores	1	3%
Flaked Piece	1	3%
Angular Fragment	2	7%

Table 10: Site MVS30 Lithic Material

Artefact Type	Number	Percentage
Chert	13	45%
Silcrete	7	24%
Quartz	2	7%
Basalt	3	10%
Tuff	4	14%

The most dominant raw material in the assemblage was again chert but the frequency of basalt at this site was increased. Flakes were the primary class of artefact and no formal tools, retouch or usewear was evident from this site.

Site Name: MVS31

Site MVS31 consisted of a single artefact located approximately 150 m south of site MVS30 situated on the lower slopes approaching the Molonglo River. Visibility conditions at the time of salvage collection are the same as for site MVS30 and no artefact was relocated due to the low levels of ground surface visibility.

Site Name: MVS32

Site MVS32 consisted of a single artefact located approximately 150 m south of site MVS31 and situated on the lower slopes approaching the Molonglo River. Visibility conditions at this site were the same as for the two previous sites and the isolated artefact was not relocated during the salvage collection.

Site Name: MVS33

Site MVS33 consists of three artefacts clustered at the junction of two fire trails approximately 150 m south of site MVS32. The site is approximately 150 m away from the Molonglo River and the slope down to the river is gradual and easily accessible in this area. Visibility conditions at the time of location matched the previous sites. None of the originally recorded artefacts were relocated at this site but an additional two artefacts consisting of a quartz core and a proximal silcrete flake were identified and salvaged. Artefact locations are shown on Figure 22.

2.7 Discussion

A total of 335 artefacts were salvaged across a large area that forms the current Project Area. As an entire assemblage the distribution of artefact types and materials is highly uniform with the same patterns recurring through all of the individual sites. For comparison, the results of the primary materials composition, artefact types for each site, and the Project Area overall, are presented in Tables 11 and 12 following.

Table 11: Artefact Type Distribution by Site

Site Name	Cores	Flakes	Broken Flakes	Angular Fragment	Total
MVS3	7	14	11	4	36
MVS4	1	1			2
MVS5		1			1
MVS6	1	2		1	4
MVS7	1	1	3		5
MVS8		2	1		3
MVS11		2			2
MVS12		2		1 hammerstone	3
MVS13		10	11	1 flaked piece	22
MVS14		2			2
MVS16		2			2
MVS19	20	65	58	4	147
MVS20	1	2	2		5
MVS22	7	22	18	1 Flaked piece 2 Angular fragments 1 hammerstone	51
MVS24		3	4		7
MVS26	2	1	1	1 flaked piece	5
MVS29		2			

MVS30	1	20	5	1 flaked piece 1 angular fragments	29
MVS33	1		1		2

Table 12: Raw material composition by site

Site Name	Chert	Silcrete	Quartz	Tuff	Volcanics	Total
MVS3	19	4	7	3	3	36
MVS4	1		1			2
MVS5	1					
MVS6	3		1			
MVS7	2		2	1		
MVS8	1			1	1	3
MVS11	2					
MVS12	1	2				3
MVS13	3	7	8	2	2	22
MVS14			2			
MVS16			2			
MVS19	87	45	11+ 3 quartzite	1		147
MVS20		3	2			5
MVS22	24	11	16			51
MVS24	4		3			7
MVS26	3		2			5
MVS29	2					
MVS30	13	7	2	4	3	29
MVS33		1	1			2

Overall the site assemblages are consistent with the regional model of small, discrete artefact scatters. Larger sites were located along the edges of the Molonglo River reflecting the importance of the river to the past Aboriginal community. The most common materials – chert, quartz, silcrete and tuff – reflect those recorded in other surveys of the region. The majority of the assemblage consisted of primary flakes that did not exhibit retouch.

Cores were located at a number of the sites representing 13% of the entire assemblage, demonstrating that flaking activity was taking place at individual sites. There was no evidence of a flaking floor or a concentrated production site within the assemblage, which probably reflects the disturbed nature of the surface scatters rather than the lack of these site uses. The disturbed nature of most sites, being located within areas that have been impacted by previous use as vehicle access roads within the pine plantations, indicates that the recovered artefacts are unlikely to be located in their primary discard location. Flaking floors are rare finds in the ACT region and have been

uncovered only in contexts that have not been impacted by past land uses. The previous land uses across the Project Area would make any such evidence of flaking floors unlikely to have survived despite the area having been used for flake production. At 13%, the occurrence of cores is higher than average for the region, with results from the Molonglo 2 assessment (Biosis 2010) only accounting for 5.4% of cores within that assemblage.

The disturbed nature of the surface soils results in a surface assemblage which is not representative of the totality of the discarded artefacts. The results are more likely to reflect the conditions of exposure: such as graded vehicle tracks which are subject to impact from vehicle, equestrian, pedestrian and cycle traffic, all of which can displace and disperse artefacts from their original locations. Roads on downward slopes have also been affected by water run off, causing erosion and transportation of artefacts.

Retouched artefacts are also higher in the assemblage accounting for 19% than previous studies in the Molonglo Valley (Stage 2 -12%). The majority of these were retouched flakes (64), of which 17 also exhibited usewear, typically along one lateral margin. These 17 artefacts, plus an additional 25 flakes which exhibited usewear but no retouch, equal 13% of the assemblage. Eight formal tools were identified within the assemblage accounting for only 2%. This high rate of discard without utilisation is a reflection of the dispersed nature of the individual sites, and the artificial amalgamation of the artefacts into one assemblage.

Dispersed, small, discrete sites usually have a low rate of retouched artefacts and primarily consist of flakes and cores, the most common types of artefacts in all assemblages. This is a direct statistical relationship where the production of one backed artefact results in 100s of flakes being generated. Therefore if we were to identify one artefact in a project area it is statistically most likely to be a flake. As site size and artefact density increases, so does the proportion of retouched and uncommon artefacts recovered. This is reflected in sites MVS13, MVS19 and MVS22 displaying a number of retouched artefacts, as these sites are also the largest sites in the Project Area. The distribution of the retouched artefacts and the formal tools recovered are shown below in Table 13.

Table 13: Distribution of Retouched artefacts.

Site	RF	RF and Use	Use	Tools
MVS3	9		3	
MVS6		1		
MSV11	1			1 - Backed artefact
MSV13	3	1	2	3 - point, backed blade broken, blade
MSV14		1		
MSV19	22	9	8	3 - blade, sidescraper, microblade
MBS22	7	4	6	1- blade
MVS24	3	1	2	
MVS26	1		1	

MVS29			1	
MVS30			1	
MVS33			1	

2.8 Summary

The distribution of the sites for the Project Area is shown in Figure 3. The findings of the artefact analysis reflect a dispersed use across the landscape. Site locations reflected two factors:

- The increased visibility along the fire trails within the pine plantation areas; and
- The focus on resources, particularly the resource of the Molonglo River, with sites situated on high points overlooking the river.

Site density is highest in those sections of the Project Area close to the Molonglo River with 11 of the 33 sites being located in close proximity. The larger, higher density sites are also concentrated in this region. Away from the river corridor the occurrence and site size and density decreased, and use of the landscape is reflected in isolated artefacts or small scatters of two or three artefacts. There does not appear to be a utilised stone resource procurement area in the Project Area. Quartz and chert outcrops occur in the Molonglo Stage 2 area on the southern bank of the Molonglo, west of Coppins Road prior to development of the area (Biosis 2010). Chert and jasperised chert also occur within the Molonglo Stage 3 Project Area. These would have been easily exploitable and the banks of the Molonglo provide adequate supplies of raw materials for hammerstones, anvils and grinding stones. Despite this close location to resources only low amounts of cortex were present on the artefacts indicating that the source materials were located further away.

The location of sites is also a reflection of their visibility at the surface. Within the Project Area, ground surface visibility was highest within the pine plantations where the largest sites were identified. However, the visibility throughout the pine plantations was uniform with high visibility along the fire trails and then isolated patches, with overall low visibility among the trees due to high blackberry, tree litter and fallen pine needles. The location of the sites on the lower and mid slopes overlooking the Molonglo and not in the areas of higher crests or towards the north of the Project Area away from water resources is not simply a result of visibility but reflects the predictive model of concentration along the river frontage utilising the resources available along the river.

3 Task 2 – Historical Woolshed assessment

The CHA identified the Kallenia Rivers Woolshed (MVSH1) as possibly possessing heritage values that would warrant its retention and nomination to the ACT Heritage Register. A further detailed assessment was required to provide the following on the structure:

- Date of construction details and fabric analysis of the standing structure
- Historical landscape values assessment
- Comparative analysis of other woolsheds within the region and the wider ACT area
- Significance values assessment against the ACT Heritage Register Criteria.

3.1 Woolsheds in the ACT Pastoral Landscape

The ACT pastoral landscape developed with distinctive patterns of settlement and land use. The 19th century homesteads were the focus of social and economic activity, of which in the ACT (then known as the Limestone Plains) sheep grazing and wool production were major foci of activity.

The Woolshed after the residence was usually the largest building erected on properties, and represent substantial investments of time and money. Woolsheds are one of the iconic class of pastoral structures of the Australian landscape. They evolved to meet their function and so, even though refinements and additions to the building structures occurred over time, there exist a class of building that is recognizable by its "look" as a woolshed. This is one of the few classes of buildings that the average person can identify as to its purpose and function from its physical appearance.

The physical presence of a woolshed dominates the surrounding landscape and Cox and Stacey (1972) Canton (1981) and Freeman (1982) have all highlighted the role of the woolshed in the rural community both physically and socially. As a result of the need to wash fleeces in the early period of the wool industry woolsheds were located near water. This location reinforced control of the river frontage, preventing competition for the prime grazing lands (Hobbes 1992:8) and marked ownership and status.

3.2 Kallenia Rivers Woolshed (MVSH1)

Kallenia Rivers Woolshed is located on Block 16 Molonglo Valley. The location of the Woolshed is shown on Figure 23. The date of the construction of the woolshed is unknown but was standing when the lease for the land was transferred to Donald Tully in 1925. Donald Tully's property was named Neattly and covered the area from Southwells Corner to Coppins Crossing Road. The land prior to this had been known as Murrays Block and was part of returned soldier settlement blocks in the Stromlo Valley (Morris and Maureen Tully personal comm.).

Land blocks east of the Murrumbidgee River leased in the 1920s were often divided without considerations of access to water and infrastructure such as woolsheds and sheep dips. Lessees were also expected to make improvements to the land, the most common being fences or the construction of farm sheds. Lessees with funds were able to build woolsheds on their property while those without rented time in the sheds of the more fortunate. The land remained in the hands of the Tully family until the 1960s when it passed into the control of the Dairy Farmers Society. Currently the land is a rural lease administered by the ACT Government.

Kallenia Rivers Woolshed is a timber framed structure on an "L" plan erected on tall round timber stumps and with a corrugated iron clad roof. The unusual element in its design and construction is the use of vertical split timber slabs for most of the lower parts of the external walls, and some internal walls around the sheep pens.



Plate 1. West elevation of shed. Note collapsed and sunken stumps



Plate 2. South elevation note sheep ramp on right

Plan 1: Site Plan of Kallenia Rivers Woolshed

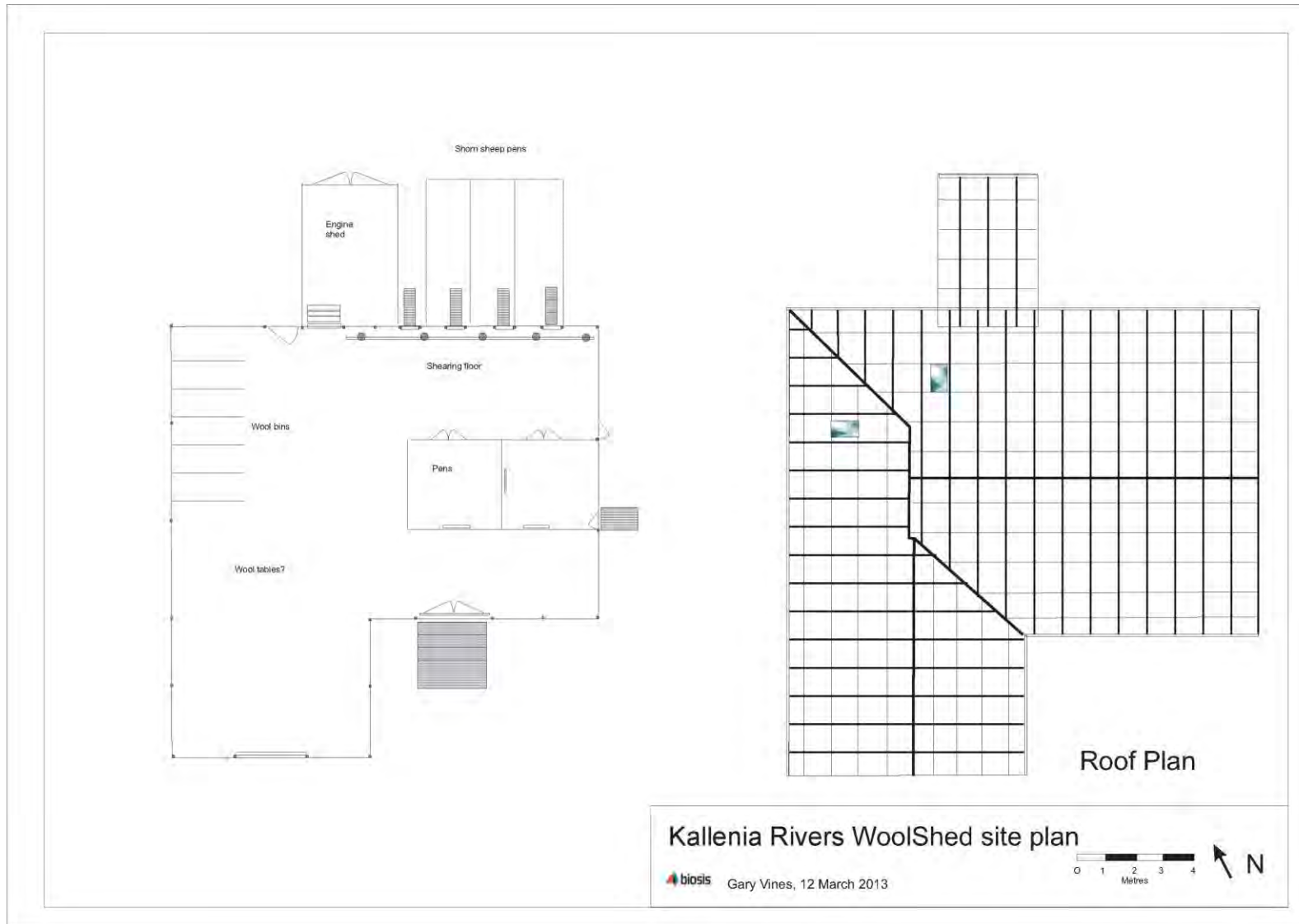




Plate 3. Part north elevation showing sheep chutes – note holes for lineshafting above and right of windows

The layout of the shed is typical, generally described as an "across the board" plan, with the sheep entry ramp on the south side leading up to sweating pens, fill pens and catching pens. The shearing floor is then to the north, while the trapdoors to the chutes (to let out the shorn sheep) are in the north wall beside each shearing stand. A small shelf below a window is located immediately above each chute.

The shearing floor has modern power points for four stands (plus one spare) attached to a large Oregon beam formerly used for attaching the lineshafting and flywheels for the shearing handset drive. Four sets of three bolt holes indicate the positions of the bearing carriers for the lineshaft and handset drive pulleys or bevel gears. Two separate cutaways in the corrugated iron on the wall at the left end of the shearing board open into a small room, demonstrating where the drive was from a gas or other portable engine.



Plate 4. Shearing stands showing large posts and lineshaft rail, and trap doors.

The sorting tables would have been located to the side of the catching pens with modern Masonite covered wool bins constructed into against the west wall. These appear to have replaced smaller wool bins using sheet galvanised iron lining, which is still present in some places. The wool press probably stood beneath the taller gable west of the catching pens.

The structure is composed of sawn hardwood framing, with simple nailed joints for the most parts. The roof framing employs a ridge and gable form without any trussing. Although some angled struts extend to the internal partition framing around the catching pens. These do not appear to be roof supporting, but probably relate to stiffening the pen framing.



Plate 5. View of internal sheep pen framing and roof structure

The stumps are all 'in the round' up to 1.5 m above ground. Several have sunk (some by as much as 1 metre) and many no longer support the floor, with past slumping evident from various packing pieces between the stumps and floor joists.

Floors are tongue and groove hardwood, with spaced battens over the sheep pen floors (to allow manure to drop through). Wall framing employs widely spaced square posts framing sections of vertical slabs with top and bottom plates. The slabs are held in place by battens nailed to the top and bottom plates on the inside and outside. Smaller framed sections about .6m high fill the spaces between the top of the slabs and the roof.

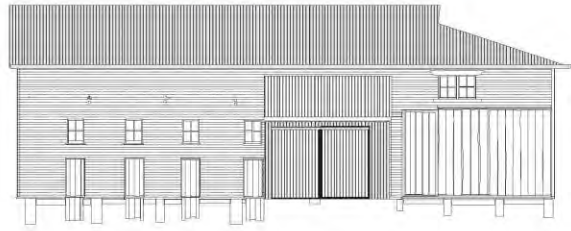


Plate 6. sheep pens showing lift gate and batten floor – note slab walls to left and rear



Plate 7. Inside of south wall showing different height slabs and framing for upper corrugated iron clad wall.

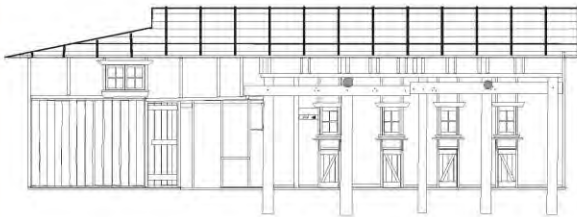
Plan 2: Elevation Plans of the Kallenia Rivers Woolshed



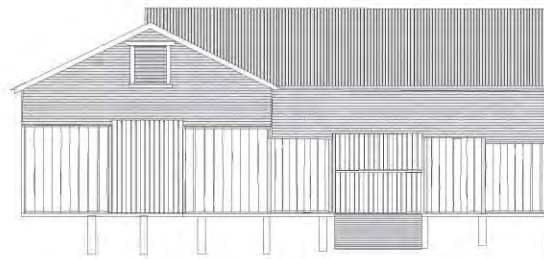
North elevation



West elevation



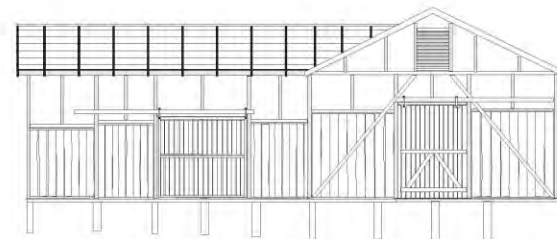
North internal elevation



South elevation



East elevation



South internal elevation

Kallenia Rivers Woolshed elevations

 Gary Vines, 12 March 2013



The timber slabs vary in height, either because they come from different parts of the original structure, different buildings, or, more likely, because they have been trimmed to remove rotten bases. These different lengths are reflected in the proportions of various walls, with taller slabs on the north western sections and shorter ones on the south side. A clear 'step-down' is evident on the bays forming the short arm of the 'L' on the south, where the wool sorting area is situated. This is expressed in a thick bottom plate, packed up so that the top plate remains at a constant height.

The top third of the walls is clad in corrugated galvanised iron with ridges running horizontal. Standard size windows (four 19 mm x 24 mm glass panes for overall 50 mm x 65 mm framed) are used throughout, with four in the west wall (two being paired), four in the north wall (one above each chute) and two paired in the east wall. Timber louvres vents are placed in the gable ends on the south and east. A small vent is also located in the gable at the junction of the two ridges.

The structure has the appearance of the southern arm of the 'L' having been added later, although construction style and finishes are all identical. It may simply reflect staged construction as materials became available.

The engine room is a small timber framed and corrugated iron clad skillion on the north side, with vertical corrugated iron cladding that incorporates double doors. The concrete slab floor does not have engine mounts, suggesting the drive was either a portable unit or mounted to a timber cradle.

Internal partitions are confined to the sheep pens and wool bins. The sheep pens have a combination of split timber slab walls, and some sawn and nailed timber hurdles. Three lift doors and two swing doors are incorporated for controlling sheep movement. There are two small doors in the east wall with remnants of timber ramps, these appear to have been an after thought, having been made by removing a few of the slabs.



Plate 8. Internal sheep pen walls with catch doors.

The battens for holding the slabs in place are still visible across the door ways. A similar section of removed slab wall can be discerned between the surviving sheep pens and the main sheep ramp on the south side. Timber battens survive on the floor indicating a former wall position.

The timber slabs are in most cases covered in fragments of both commercial printed wall paper, and newspapers pasted over during the original occupation. Wallpaper patterns include yellow and white leaf patterns, a stylised fern and dot pattern in white on a buff background and a more ornate blue floral pattern.

Some slabs have paper on both sides indicating they originally came from internal walls. Most of the slabs have evidence of recutting at the ends, probably to make them fit the new structure, and perhaps to remove rotting caused from their original position.



Plate 9. wallpaper overlaying newsprint on recycled timber slab walls



Plate 10. Blue floral pattern wallpaper



Plate 11. Late 1920s newspaper advertisement papering walls

There are several layers on top of each other indicating repeated papering, with a possible sequence as follows:

Earliest 1-3 layers of newspapers c 1900-1910

Printed wall paper several styles c 1910-1930

Latest 1-2 layers of newspaper c 1920-30

These approximate dates are based on matching text from the newspapers on the slabs with a search of digitised newspapers through 'Trove' the digitised newspaper search facility of the National Library. Some examples of the search results are.

"I can confirm the Truth. Herbert Weaver was in my employ" - Ad runs 1902-1904¹

"A terrible snake adventure is narrated by an American who lived for twelve years in the Phillipine Islands" - Article dated June 1909²

undervest cotton "round neck and narrow shoulder" obtained in women's sizes- Advertised 1923-29³

A fruit box attached to the wall as a shelf has a brand mark burnt into the timber denoting a 'V' over a wavy line.



Plate 12. Brand burnt into shelf

¹ Advertising. (1904, March 19). *The Sydney Morning Herald* (NSW : 1842 - 1954), p. 6. Retrieved January 22, 2013, from <http://nla.gov.au/nla.news-article14607614>

² A Terrible Death. (1909, June 24). *Kilmore Free Press* (Kilmore, Vic. : 1870 - 1954), p. 1 Edition: MORNING.. Retrieved January 22, 2013, from <http://nla.gov.au/nla.news-article58274526>

³ For example *The Sydney Morning Herald* (NSW : 1842 - 1954) Thursday 28 January 1926

3.3 Woolsheds on the ACT Heritage Register

There are 5 woolsheds listed on the ACT Heritage Register in their own right and a further 6 listed as part of a homestead complex or pastoral landscape.

The woolsheds that are currently listed are:

- Duntroon Woolshed
- Orroral Woolshed
- Yarralumla Woolshed
- Cuppacumbalong Woolshed
- Kambah Woolshed

As components of larger listings:

- Huntley Homestead
- Elm Grove heritage Precinct
- Horse Park Homestead precinct
- Belconnen Farm – 1930s woolshed
- Callum Brae Homestead
- Tennant Homestead

Hobbes undertook a survey of woolsheds within the ACT region with the assistance of students from the University of Canberra in 1992. He developed a methodology for producing type profiles for shearing sheds to allow for comparison of sheds to assess their significance.

Hobbes did not assess the Kallenia Rivers Woolshed in his study but concluded that a regional group of woolshed lies east of the Murrumbidgee River and consists of two categories build on leasehold land since 1911.

- Category 1 – 1920-1930s – built of recycled materials with raised timber floors (Avonley – not listed on register)
- Category 2 – 1930s – purpose built sheds requiring more stringent building approvals and building materials (Huntley – listed on Register)

3.4 Discussion

Kallenia Rivers Woolshed (MVSH1) was constructed as part of a soldier settlement lease and reflects the practice of recycling materials to cut costs. Comparable sites on the heritage register are Callum Brae and Tennant which demonstrate 1920s recycled materials and soldier settlement leases.

Features intrinsic to the heritage values of the woolshed are:

- Example of soldier settlement building styles including the recycling of the building materials for economy
- The wall paper and newspaper fragments that still exist as lining on the interior walls – headings and articles can still be read. This is a unique feature of the woolshed.

Although no longer in use as a working woolshed the buildings dominate the landscape and provide a visual reminder of the past occupation of the area and the legacy of wool production in the region. The woolshed is structurally sound and a range of adaptive reuse options would be available for its future management. An example of the type of use that the woolshed could provide would be as a focus point for education groups (community and school) or could be adapted to

other uses if compatible with heritage values. The adaptive reuse of the Kambah woolshed would be an example of this type of adaptive reuse.

It is highly valued by pastoralists in the region, the Tully family and the historical community in ACT.

3.4.1 ACT Heritage Act 2004 criteria

The ACT Heritage Act 2004 specifies twelve criteria (a – l) against which the significance of a place can be assessed. The background research on the woolshed, comparative assessment and fabric assessment of the Woolshed have enabled a determination to be made as to the applicability of the following criteria.

Criteria

(a) it demonstrates a high degree of technical or creative achievement (or both), by showing qualities of innovation, discovery, invention or an exceptionally fine level of application of existing techniques or approaches;

Not applicable.

(b) it exhibits outstanding design or aesthetic qualities valued by the community or a cultural group;

Not applicable.

(c) it is important as evidence of a distinctive way of life, taste, tradition, religion, land use, custom, process, design or function that is no longer practised, is in danger of being lost or is of exceptional interest;

The 1920s woolshed is representative of a pastoral way of life, in particular the harsh conditions of small soldier settlements and the frugality of their farming lifestyles. Wool grazing has ceased in the Molonglo Valley and no physical reminders of its presence in this northern section remain apart from Kallenia Rivers Woolshed. .

(d) it is highly valued by the community or a cultural group for reasons of strong or special religious, spiritual, cultural, educational or social associations;

The woolshed is highly valued by pastoral families in the district, the national trust and the historical community of the ACT.

(e) it is significant to the ACT because of its importance as part of local Aboriginal tradition;

Not applicable.

(f) it is a rare or unique example of its kind, or is rare or unique in its comparative intactness;

Woolsheds from this period of soldier settlement in the ACT are rare. The practise of re-use of materials is clearly seen in the woolshed with the incorporation of house walls into the structure. These internal walls retain the original wallpaper and newspaper fragments from when they were a domestic dwelling, visually impressing this important detail of the resourcefulness of pastoralists.

(g) it is a notable example of a kind of place or object and demonstrates the main characteristics of that kind;

The Kallenia Rivers Woolshed demonstrates aspects of a 'typical' shearing shed which has several features which distinguish it from other types of structures (ie sheds or homesteads). These characteristics are:

Single story structure of bush poles with timber stump foundations. Internal structure is framed with sawn timber producing typically a mix of balloon framing and pole construction. Simple pitched roof with lean to or aisle extensions cover the structure which is covered either totally or substantially in vertical galvanised iron sheeting. With raised floors to allow for drainage has internal area of pressings, baling, storage and sheep sweating areas. Typically woolsheds have a combination of symmetrical and asymmetrical pitched roofs where additional height was required.

The reuse of materials and survival of original fabric is notable and rare in the ACT region.

(h) it has strong or special associations with a person, group, event, development or cultural phase in local or national history;

The woolshed is associated with the soldier settlement phase of settlement of the Molonglo, the Tully Family and the pastoral landscape of the valley. Both of these ways of life are no longer practised in the Molonglo Valley due to increasing urbanisation.

(i) it is significant for understanding the evolution of natural landscapes, including significant geological features, landforms, biota or natural processes;

Not applicable.

(j) it has provided, or is likely to provide, information that will contribute significantly to a wider understanding of the natural or cultural history of the ACT because of its use or potential use as a research site or object, teaching site or object, type, locality or benchmark site;

The woolshed has high potential to provide further information to future researchers due to the preservation of the original interior fabric. As a structure it could provide opportunities for conservation and heritage management students to practise their skills, and provide primary and secondary students for a location to base their local history lessons. It provides a visual reminder of the past lifeways of the Molonglo valley and by its preservation ensures continuation of the pastoral presence within an urban environment.

(k) for a place—it exhibits unusual richness, diversity or significant transitions of flora, fauna or natural landscapes and their elements;

Not applicable.

(l) for a place—it is a significant ecological community, habitat or locality for any of the following:

- (i) the life cycle of native species;
- (ii) rare, threatened or uncommon species;
- (iii) species at the limits of their natural range;
- (iv) distinct occurrences of species.

Not applicable.

3.5 Kallenia Rivers Woolshed (MVSH1) Significance and Comparative Assessment

The Kallenia Rivers Woolshed is a relatively small, late and standard design example of this common rural building type. It is distinguished by its use of recycled split timber slabs taken from an earlier cottage on the property, and the unusual integration of these into a disparate design form. That is, whereas timber slab buildings form another large group of characteristic Australian rural buildings, which include woolsheds in their number (most famously the Mungo Woolshed), the adaptation of the form to this relatively late example at Molonglo, shows how local ingenuity and "making do" took the earlier historic form and married it to a more modern sawn timber frame construction. The use of vertical slabs held by nailed battens is a function of the insertion of this element into an otherwise standard balloon frame structure, rather than the more integral 'drop slab' construction found on many original slab buildings.

Kallenia Rivers Woolshed is unique in the Molonglo valley context and within its structure contains original fabric that illustrates the re use of materials in the soldier settlements of the region. On scientific grounds due to the woolshed, contents, condition and representative values the structure should be conserved. The woolshed represents a structure that is intact in its elements and in a condition that retains heritage values.



Plate 13. Mungo Woolshed http://www.teachingheritage.nsw.edu.au/section07/a_index.php

The Kallenia Rivers Woolshed is of relatively small scale compared with some of the dedicated squatter-era sheep stations. For example, Cuppacumbalong, and Duntroon Woolsheds are each four or five times larger than Molonglo, with space for 15-25 shearing stands each. Orroral woolshed is of a more comparable scale and form, and reflects a similar farm type, relating to soldier settlement in the 20th century.

Against the criteria for listing to the ACT Heritage register, Kallenia Rivers Woolshed meets several criteria and qualifies for nomination to the ACT Heritage Register. The location of the Woolshed is shown in Figure 23.

4 Task 3 – Sub Surface Testing

Nine areas of Potential Archaeological Deposit (PAD) were subject to sub surface testing to determine the presence and extent of archaeological deposits. To test the predictive model eight areas of non-PAD were also tested to provide a data set for comparative analysis across the landform units.

The results of the sub surface testing program are detailed below in Project Area sections for comparative purposes with the Biosis 2012 CHA and surface salvage sections of this report. Grid References refer to the corner boundaries of the PADs or area of testing. An overview of the locations of the sub surface testing test pits is provided on Figure 24.

4.1 Methodology

The following methodology was followed in the completion of the sub surface testing program.

- Mark out and record the location of each excavation test pit. Test pits measured 50 cm x 50 cm.
- Transect lines of test pits spaced evenly across the Project Area and crossing the different land form elements of lower and middle slopes were marked out and excavated. The test pits within these lines were spaced approximately 50 m apart and would extend to either 60 cm or if cultural material is located to culturally sterile layers.
- Pits were excavated by shovel and trowel using standard archaeological methodology including recording of spit levels and sedimentary, cultural and stratigraphic features. Section drawings and photographs of each test pit were taken and pH measurements for representative soil samples taken.
- Spit intervals were 100 mm unless cultural or stratigraphic features require this interval to be varied.
- All excavated material was wet sieved through a 5 mm mesh. The excavation and sieving stations were under the direction of Biosis staff assisted by representatives of the RAOs.
- Any cultural material recovered was labelled with its location and depth and retained for detailed analysis. On completion of the assessment, recovered cultural material will be curated at the ACT Heritage Unit along with the sub surface testing report.

4.1.1 Thresholds for additional test pits

If any of the following thresholds are reached during the excavation of test pits then:

1. The pit will be extended to a 100 cm x 50 cm square to allow visibility, excavation and recording of feature; and
2. If required then a further 50 cm x 50 cm test pit will be placed directly adjacent to the excavation extending the section wall, until features are fully recorded or artefact density decreases below the trigger threshold.

Relevant thresholds are:

- Artefact density in excess of three artefacts per 10 cm spit in the 50 x 50 cm test pit (as per ACT Heritage Unit specifications);
- The remains of a hearth or other cultural feature is identified; and
- In the event that depths exceed 60 cm the walls of the test pit will become unstable and the pit will be extended to a 100 cm x 100 cm square to allow visibility, excavation and recording of stratigraphic features. In the event that further depth or visibility is required extension by 50 cm x 50 cm excavation test pits will occur. Due to OHS requirements excavation must cease at a maximum depth of 1.1 m.

In the event that any of the following are found then excavation will cease:

- In situ bone material relating to Aboriginal occupation is identified;

- A lithic flaking floor or dense cultural layer is identified requiring detailed salvage; or
- Bedrock or massive clay substrate is encountered.

4.1.2 Analysis of Cultural material

Any faunal material recovered will be sorted to species and minimum number of individuals. All lithic items will be examined in detail using a low-power binocular microscope and incident illumination and/or hand lens.

A basic analysis of lithic variables such as raw material, size, primary and secondary flaking characteristics (platform and termination type, degree of retouch) will be undertaken on recovered lithics from sub surface contexts for the Project Area as an assemblage.

On completion of the lithic analysis the items will be stored individually in resealable plastic bags marked with their identification number and provenance. Artefacts will then be curated at the ACT Heritage Unit along with the sub surface testing report containing their provenance and technological details.

4.2 Results - PAD excavations

4.2.1 Section 1: Kama Woodlands to Coppins Crossing Road

Section 1 is bounded by the Molonglo River to the south, William Hovell Drive to the north, Coppins Crossing Road to the east and the boundary of the Kama Woodlands to the west. The land is mainly used for pastoral activities with the exception of the sewerage treatment works and access tracks which are located on the southern boundary along the banks of the Molonglo River.

One PAD was identified during the field survey in this section and was selected for sub surface testing.

Site Name: PAD1

Deep Creek bisects this PAD area that would have provided a source of permanent water and a focus of occupation. Gently sloping terraces line the length of its banks except for the area at the confluence with the Molonglo River which become steep and rocky. As a result the entire length of Deep Creek for 100 m on each side is designated as moderate potential PAD for sub surface deposits.

An area measuring 250 m x 100 m, located on the north western creek bank at the junction with a smaller creek line was selected as an area of slightly higher potential than the entire length of the creek and twelve test pits were excavated to determine the presence of sub surface deposits. The locations of these test pits are shown on Figure 25 and their grid reference is listed in Table 14 below. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm.

Typical soil profile from this PAD consisted of:

- Fine silty topsoil
- Gravel and clay inclusion in silty loam
- Degrading shale bedrock, large rock portions and clay increasing
- Orange clay level.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing and a finding of low archaeological potential was allocated to this area.

Table 14: PAD 1 Test pit locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted
9	Redacted
10	Redacted
11	Redacted
12	Redacted

4.2.2 Section 2: Coppins Crossing Road to Stromlo Pine Plantation

Section 2 is bounded by Coppins Crossing Road to the west, William Hovell Drive to the north, the Molonglo River to the south and the boundary fence of the current pastoral lease to the east.

One PAD was identified during the field survey in this section and was selected for sub surface testing.

Site Name: PAD2

Coppins Creek forms part of the southern boundary for this survey area. As with Deep Creek in Section 1, Coppins Creek would have provided ideal camping conditions along its banks. As a result, the entire length of Coppins Creek is classified as possessing moderate potential due to its undulating surrounding landforms. However, based on the topography and aspect, and the location of one of the newly identified sites, an area of higher potential has been designated along the length of Coppins Creek for sub surface testing, measuring 200 x 100 m, and defined as an area of high potential PAD.

Twelve test pits were excavated across this PAD. The locations of these test pits are shown on Figure 26 and their grid reference is listed below in Table 15. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm. An area of water drainage was included in this PAD – soils within this depression were deeper with a larger component of grey silty alluvial soil.

Soil profiles from the excavations are attached at Appendix 3. Two artefacts were recovered from the sub surface testing: one quartz core from TP7 and one quartz flake from TP6. As a result, low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 15: PAD 2 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted
9	Redacted
10	Redacted
11	Redacted
12	Redacted

4.2.3 Section 3: Stromlo Pine Plantation

Section 3 is located to the south of Section 2 and is located in the area of the Stromlo pine plantations which were destroyed in the Canberra Bushfires of 2002-2003. No areas of PAD are located in this Section.

4.2.4 Section 4: Stromlo Pine Plantations to Coppins Corner

Section 4 continues to the southeast of Section 3 with the same general conditions of visibility and disturbance as this area was also part of the Stromlo pine plantation. No areas of PAD are located in this Section.

4.2.5 Section 5: Coppins Corner to Southwell Corner

Section 5 continues south from Section 4, still within the old Stromlo pine plantations. Section 5 has a larger area of gentle river flats fronting the Molonglo River (which is still steep to access in some parts) and covers Misery Hill and Misery Point. The area of Misery Point has not been disturbed by the pine plantation and is grassed with access tracks and steep slopes to the Molonglo River.

One PAD was identified during the field survey in this section and was selected for sub surface testing.

Site Name: PAD3

An area of moderate potential was identified within Section 5 based on the landscape predictive model, measuring 200 x 50 m. This was further refined when mapped against the location of the identified sites to identify an area of high potential PAD on the mid slopes above the Molonglo River but off the river flats. This area is on level ground at the commencement of the pine plantings.

Eight test pits were excavated across this PAD. The locations of these test pits are shown on Figure 27 and their grid reference is listed below in Table 16. Soil profiles in this area were deeper with the average test pit finishing on the compacted clay level at 40 cm. Typical soil profiles in this location consisted of grey sandy topsoil, silty loam sometimes with small inclusion of gravel, followed by silty clay soil ending on grey clay.

Soil profiles from the excavations are attached at Appendix 3. Two artefacts were recovered from the sub surface testing: one chert flake and one silcrete flake from TP3. A finding of low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 16: PAD 3 Test pit locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

4.2.6 Section 6: Southwell Corner to Canberra National Arboretum

Section 6 is completely within the area of the Stromlo Pine Plantation. It is bounded by the Molonglo River to the south and west, by section 5 to the north and the Canberra National Arboretum to the east.

Site Name: PAD4

An area of moderate potential was identified within Section 6 based on the landscape predictive model, measuring 200 x 50 m. This was further refined when mapped against the location of the identified sites (MVS19) to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes and at its western end is approximately 25 m from the river.

Nine test pits were excavated across this PAD. The locations of these test pits are shown on Figure 28 and their grid reference is listed below in Table 17. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm. Water erosion had removed surface layers and caused erosion channels, some as deep as 20 cm, providing visibility within the PAD.

Soil profiles from the excavations are attached at Appendix 3. Two chert flakes were recovered from the sub surface testing in TP3 Spit 2. Despite the high concentration of surface artefacts at this location, based on the sub surface results, a finding of low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 17: PAD 4 test pit locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted
9	Redacted

Site Name: PAD5

An area of moderate potential was identified within Section 6 based on the landscape predictive model, measuring 200 x 50 m. This was further refined when mapped against the location of the identified sites (MVS20 and 21) to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes and at its western end is approximately 25 m from the river. At the time of field excavation it was discovered that the locations of some of the test pits were now totally obscured by blackberry growth. The orientation of the test pit layout was modified to cover the same landform but on a north south axis rather than an east west orientation.

Eight test pits were excavated across this PAD. The locations of these test pits are shown on Figure 29 and their grid reference is listed below in Table 18. Soil profiles in this area were deep with the average test pit finishing on the gravel based clay level at 100 cm. Soils in this area consisted of sandy topsoil with increasing levels of silt and gravels to the base clay level.

Soil profiles from the excavations are attached at Appendix 3. One quartz flake was recovered from TP6. Despite the depth of the soils and the surface site, a finding of low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 18: PAD 5 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Site Name: PAD6

An area of moderate potential was identified within Section 6 based on the landscape predictive model, measuring 200 x 50 m. This was further refined when mapped against the location of the identified sites to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes approximately 25 m from the river.

Eight test pits were excavated across this PAD. The locations of these test pits are shown on Figure 30 and their grid reference is listed below in Table 19. Soil profiles in this area were deep with the average test pit finishing on the gravel clay level at 80-100 cm.

Soil profiles from the excavations are attached at Appendix 3. Fourteen artefacts were recovered from the sub surface testing across 8 TPs usually within Spits 1 and 2. These artefacts consisted of flakes and broken flakes with one core fragment with the dominant material being quartz. Only one artefact a silcrete flake was not constructed on this material. A finding of moderate sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 3.

Table 19: PAD 6 Test pit locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Site Name: PAD7

An area of moderate potential was identified within Section 6 based on the landscape predictive model, measuring 200 x 50 m. This was further refined when mapped against the location of the identified sites to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes and at its southern end is approximately 25 m from the river.

Eight test pits were excavated across this PAD. The locations of these test pits are shown on Figure 31 and their grid reference is listed below in Table 20. Soil profiles in this area were moderate in their depth and compactness, with the average test pit finishing on the heavily compacted clay level at 50 cm.

Soil profiles from the excavations are attached at Appendix 3. Three chert flakes were recovered from the sub surface testing in three separate test pits in spits 1 and 3. Based on these low results a finding of low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 20: PAD 7 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Site Name: PAD 8

An area of moderate potential was identified within Section 5 based on the landscape predictive model, measuring 300 x 50 m. This was further refined when mapped against the location of the identified sites to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes and at its southern end is approximately 25 m from the river.

Eight test pits were excavated across this PAD. The locations of these test pits are shown on Figure 32 and their grid reference is listed below in Table 21. Soil profiles in this area were moderate in depth with the average test pit finishing on the gravel, rock and clay level at 60 cm.

Soil profiles from the excavations are attached at Appendix 3. Two chert flakes and one quartz flake were recovered from the sub surface testing across two test pits. Based on these finding of low sub surface archaeological potential was allocated to this area. Artefact details are provided in Appendix 2.

Table 21: PAD 8 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Site Name: PAD 9

An area of moderate potential was identified within Section 5 based on the landscape predictive model, measuring 300 x 50 m. This was further refined when mapped against the location of the identified sites to identify one area of high potential PAD on the mid slopes above the Molonglo River. This area slopes gradually from the mid to lower slopes and at its southern end is approximately 25 m from the river.

Twelve test pits were excavated across this PAD. The locations of these test pits are shown on Figure 33 and their grid reference is listed below in Table 22. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm. A high level of disturbance within this area was reflected in the profiles of the test pit.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing program. Based on this result a finding of low sub surface archaeological potential was allocated to this area.

Table 22: PAD 9 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted
9	Redacted
10	Redacted
11	Redacted

Test pit No	Grid Reference (MGA Zone 55)
12	Redacted

4.3 Results – Comparative Excavation Areas

To test the predictive model a series of excavation areas were selected in area which displayed low potential for sub surface deposits. These areas were selected due to a range of factors including distance to water (more than 200 m), lack of surface sites, steep slopes or the exposed nature of the landforms. These non-PAD areas were originally defined as have low potential rather than no potential as all areas of the landscape contain some degree of potential.

Area 1

Eight test pits were excavated across this excavation area. The locations of these test pits are shown on Figure 34 and their grid reference is listed below in Table 23. Soil profiles in this area were relatively deep with the average test pit finishing on the compacted clay level at 40 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 23: Area 1 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 2

Eight test pits were excavated across this Area. The locations of these test pits are shown on Figure 35 and their grid reference is listed below in Table 24. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 24: Area 2 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 3

Eight test pits were excavated across this area. The locations of the test pits are shown on Figure 36 and their grid reference is listed below in Table 25. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 25 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 25: Area 3 Test pit locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 4

Eight test pits were excavated across this area, located on a spur line removed from water sources. The locations of these test pits are shown on Figure 37 and their grid reference is listed below in Table 26.

Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 20 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 26: Area 4 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 5

Eight test pits were excavated across this area which is located on the lower slopes removed from water sources. . The locations of these test pits are shown on Figure 38 and their grid reference is listed below in Table 27. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 30 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 27: Area 5 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 6

Eight test pits were excavated across this testing area. The locations of these test pits are shown on Figure 39 and their grid reference is listed below in Table 28. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 20 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 28: Area 6 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 7

Eight test pits were excavated across this testing area. The original location of the testing transects was abandoned soon after starting as the soil profiles were indicating a high level of disturbance with imported fill and mixed soil. An area was selected on the down slope of the crest to the Molonglo River for sub surface testing as according to the predictive model larger sites would be located either on the crest or the simple slopes to the river.

The locations of these test pits are shown on Figure 40 and their grid reference is listed below in Table 29. Soil profiles in this area were relatively deep with the average test pit finishing on the compacted clay level at 40 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 29: Area 7 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted
7	Redacted
8	Redacted

Area 8

Six test pits were excavated across this testing area which was located on a steep lower slope approximately 15 m from the Molonglo River. The locations of these test pits are shown on Figure 41 and their grid reference is listed below in Table 30. Soil profiles in this area were shallow with the average test pit finishing on the compacted clay level at 20 cm.

Soil profiles from the excavations are attached at Appendix 3. No artefacts were recovered from the sub surface testing. A finding of low sub surface archaeological potential remains allocated to this area.

Table 30: Area 8 Test pit Locations

Test pit No	Grid Reference (MGA Zone 55)
1	Redacted
2	Redacted
3	Redacted
4	Redacted
5	Redacted
6	Redacted

4.4 Discussion

The sub surface testing results were unexpected from the Project Area. Based on past archaeological studies completed in the region and the distribution of surface sites it was anticipated that sub surface deposits would be located in the gently sloping elevated areas above the Molonglo River. This was highly anticipated for PADs 4, 8 and 9 which were associated with large surface scatters and provided a sheltered location from prevailing winds, in close proximity to the river frontage but located outside of the flood zone.

The PADs revealed no evidence for the existence of sub surface deposits in these areas. The soil profiles were shallow in most areas, but substantial depths occurred at PADs 4, 5 and 6. The location of the large surface scatters indicates that these areas were utilised by the Aboriginal occupants of the area, however the surface sites represent generalised camp sites and did not provide evidence of flaking floors (knapping floors) or high levels of debitage associated with production areas. The surface scatters without the existence of any sub surface deposits would appear to represent transient camp sites rather than long established seasonally returning base camps.

The lack of sub surface deposits is also a reflection of the level of ground disturbance which may have completely destroyed all subsurface evidence. Sub surface deposits are shallow in this region due to soil types and the erosion prone nature of the soils which are susceptible to disturbances to a higher degree than is typically assumed.

Overall, areas previously defined as being of moderate and high potential areas were redefined as low areas of archaeological potential for subsurface deposits based on the results of the subsurface investigations. This does not take away from the archaeological potential of the Project Area as many surface scatter sites clearly suggests that Aboriginal people were using or moving through the area.

The testing of the non PAD areas did confirm the predictive model returning nil results for the sub surface deposits. In light of the findings of the PAD testing though it would appear that sub surface deposits are unlikely across all the landscape features of the Project Area and that a predictive model based on the landforms and proximity to water while accurately reflecting the location of surface sites does not reflect the potential for sub surface deposits.

5 Task 4 – Indigenous Cultural Area

During the field survey an area located at Block 5 Molonglo Valley was identified by the RAOs as holding cultural significance. This area was the subject of an on site meeting to discuss the following:

- What was the significance of the area?
- What were the wishes of the RAOs about future development of the area and management options for the area?

The location of the area of significance is shown within Appendix 4. The consultation was held on Friday the 1st of March 2013 to provide RAOs a further opportunity to visit the area and provide information as to significance of the area.

Only one of the RAOs attended the meeting and provided information on the area. We greatly appreciate the sharing of this knowledge regarding this place. This information is restricted and confidential due to cultural sensitivities.

Information relating to this site is contained in Appendix 4 of this document and will not be available to the general public. The issue of access to this information, who was able to access this information and the form of the information to be shared was discussed with the Buru Ngunawal representative to ensure that a procedure could be developed to allow the people who had responsibility for the area to be informed so they can make management decisions.

Access to this information is through the ACT Heritage unit who will be responsible for controlling access to this cultural knowledge and deciding when it should be made available and in what form to land managers in other Government Departments.

6 Conservation Management Plan

6.1 Proposed Development

The ACT Government, Environment and Sustainable Development Directorate are proposing to develop Stage 3 of the Molonglo Valley Future Urban Releases (Figure 1 and 2). The area lies on the north side of the Molonglo River Corridor and to the south of William Hovell Drive, with Coppins Crossing Road running within the Project Area.

A general description of the proposed residential subdivision development works include:

- General site establishment works including concrete building foundations, and construction of other associated structures;
- Land reshaping to facilitate the development which will include a combination of cut and fill;
- Underground utilities will be extended throughout the Project Area. These include water, sewer, stormwater, electricity, gas, telecommunications and fibre optics.

6.2 Potential Impacts

As discussed above, the proposed development requires a certain level of disturbance within the Project Area. This disturbance may impact the physical remains and significance of archaeological sites in the following way:

- The types of activities that will impact the ground surface and sub-soils include the excavation of infrastructure, such as drainage, sewerage, communication and roads; and foundation trenches for residential structures.
- Activities that will potentially cause less impact on sub-soils include the establishment of public open space and establishment of vegetation.

Due to these predicted impacts the salvage program was undertaken and the sub surface investigation taken to mitigate and determine the full impacts of the development. The collection of artefacts has destroyed the surface recorded sites and no sub surface sites were identified by the sub surface testing program. No areas of moderate or high potential were confirmed by the sub surface testing program.

One historical site Kallenia Rivers Woolshed (MVSH1) will be impacted by the development unless mitigation and management strategies are implemented for the site. Potential impacts may range from complete destruction to separation from its landscape context or alternatively to conservation, interpretation and adaptive reuse.

6.3 Management Recommendations

The following recommendations are based on the results of the background research, fieldwork and from on-site consultation with the RAO's. This report will be sent to the four RAO's for comment and provide a further opportunity for direct Aboriginal community input into this report. These management recommendations are devised to minimise the impact of the development on the identified heritage sites wherever possible. The recommendations for the area are:

- All identified Aboriginal Cultural Heritage sites located within the Project Area have been the subject of archaeological salvage. There are no further requirements for these sites (MVS2 - MVS33);
- Areas of PAD (1,2,3,4,5,7,8,9) within the Project Area have been reallocated to low potential and their designation of PAD should be removed. PAD 6 has been the subject of sub surface testing resulting in a moderate designation. Pad 6 does not present a constraint on the project and no further investigation is required;

- Consultation with the Aboriginal community has identified an area that requires additional management considerations due to cultural values. This area poses an area of constraint on the development and impacts to this area should be avoided;
 - In the event that impacts to the cultural area can not be avoided advice should be sought from the ACT Heritage Unit as to an appropriate management strategy for the impacts;
 - Consultation with Aboriginal community will need to be undertaken if the cultural area is to be impacted;
 - The current use (pastoral agistment) of the cultural area is compatible with its heritage values.
- Kallenia Woolshed meets the criteria for listing to the ACT Heritage Register. A site specific CMP should be developed for the site to guide its management until a formal nomination to the ACT Heritage Register is prepared for the ACT Heritage Council to assess and consider. In the event that such a nomination is rejected by the ACT Heritage Council then there are no further heritage constraints for the site. The nomination should be prepared as soon as possible to provide certainty as to the future status of this structure;
- if previously unidentified archaeological artefacts or sites are located during the course of development within the Project Area, the process outlined in the Unanticipated Discovery Plan should be followed; and
- Copies of this report should be submitted to:
 - ACT Heritage Council (via the ACT Heritage Unit)
 - RAOs

7 Unanticipated Discovery Plan

The process outlined in the unanticipated discovery plans should not be undertaken until it has been endorsed by the ACT Heritage Council. The plans provide guidance to project personnel so that obligations in accordance with the *Heritage Act 2004* can be met.

7.1 Unanticipated Discovery Plan

If any items are uncovered during the course of works, which are considered to possibly be of Aboriginal or historical significance the following unanticipated discovery plan is provided

7.1.1 Unexpected discovery of isolated or dispersed Aboriginal cultural heritage

If suspected isolated stone artefact scatter (less than 5 artefacts) or other small items is found then the following management process must be followed:

1. Work must immediately stop in the area within a buffer zone of 20 metres from the primary grid coordinate.
2. A suitably qualified heritage advisor needs to be engaged to assess the potential site.
3. If the items are not considered to be Aboriginal, activity may recommence.
4. If the items are considered to be Aboriginal, the artefacts should be recorded and then salvaged in accordance with approval from the Heritage Council.
5. Following completion of the recording and salvage, the activity may then recommence.

7.1.2 Unexpected discovery of stratified occupation deposits

If a stratified occupation deposit, dense artefact scatter or a hearth feature is found, works must stop in the relevant area and the following process be followed:

1. Work must immediately stop in the area within a buffer zone of 20 metres from the primary grid coordinate.
2. ACT Heritage must be contacted on **13 22 81** for advice.
3. A suitably qualified heritage advisor needs to be engaged to assess the potential site. The Aboriginal deposits should be recorded and documented.
4. If the items are not considered to be Aboriginal, activity may recommence.
5. If the items are considered to be Aboriginal, the Proponent and the Cultural Heritage Advisor, will discuss the possibility of avoiding and minimising harm to the Aboriginal cultural heritage, and the Proponent must avoid or minimise harm to the Aboriginal cultural heritage, where possible.
6. Where harm cannot be avoided, all RAO Groups should be contacted by the heritage advisor and be engaged by the proponent to facilitate the on-site assessment and provide heritage advice.
7. Following consultation with the ACT Heritage Unit and with the permission of the ACT Heritage Council, the Cultural Heritage Advisor and RAO's will salvage the cultural heritage with the aim of establishing the extent, nature and significance of the Aboriginal cultural heritage.
8. Subsequent aims of the salvage excavation will be to establish:
 - The relative and absolute (if possible) age of any identified Aboriginal cultural heritage;
 - The character of the excavated artefact assemblage if extant; and

- As far as possible, the nature of occupation of any identified Aboriginal cultural heritage.
9. In cases where cultural material is considered in situ and where suitable sample material is available, appropriate age determinations (e.g. radiocarbon) are to be made to establish the age of the cultural material.
 10. Any artefacts recovered during excavations are to be secured by the Cultural Heritage Advisor until the salvage has been concluded.
 11. Details regarding the methodology of any collection or salvage of Aboriginal cultural heritage located during the project will be determined by the Cultural Heritage Advisor and RAO's. Without limiting the options, a Cultural Heritage Advisor will:
 - Catalogue the Aboriginal cultural heritage;
 - Label and package the Aboriginal cultural heritage with reference to provenance; and
 - Ensure all excavated deposits are sieved, and the presence of any additional cultural heritage material recorded in detail;
 12. Works may recommence at completion of the salvage excavation.
 13. Any materials collected will need to be lodged with ACT Heritage following completion of the salvage and analysis.
 14. A report detailing the findings of any collection, salvage or analysis of material recovered as a result of this activity will be completed and lodged with the ACT Heritage. This report will include plans and/or maps that accurately present the location and extent of any excavation, and the details of exposed sediments and stratigraphy.

7.1.3 Unexpected discovery of historical cultural heritage

If suspected historical items are found then the following management process must be followed:

1. Work must immediately stop in the area within a buffer zone of 20 metres from the primary grid coordinate.
2. ACT Heritage must be contacted on 13 22 81 for advice.
3. A suitably qualified heritage advisor needs to be engaged to assess the potential site.
4. If the items are not considered to be historically significant, activity may recommence.
5. If the items are considered to be historically significant, a management recommendation should be given by the heritage advisor.
6. Following approval by ACT Heritage Council and completion of the management recommendation, the activity may then recommence.

7.1.4 Unexpected discovery of Human Remains

If any suspected human remains are discovered during any activity works, all activity in the areas must cease immediately. The following contingency plan describes the actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the activity area must follow these steps.

1. Discovery:

- If any suspected human remains are found during any activity, works in the vicinity **must** cease.
- All personnel should leave the area immediately
- The remains must be left in place, and protected from harm or damage.

2. Notification:

- The ACT Federal Police must be notified immediately. All details of the location and nature of the human remains must be provided to the relevant authorities.
- If there are reasonable grounds to believe that the remains are Aboriginal, ACT Heritage must be contacted immediately on **13 22 81**.
- The Project Manger must be contacted immediately.

3. Process:

- If the remains are considered to be Aboriginal by the AFP an appropriate management and mitigation, or salvage strategy will be implemented following consultation with the RAOs. The strategy undertaken will depend on the circumstances in which the remains are found, the number of burials found and the type of burials, and the outcome of consultation with the RAOs.
- The Representative Aboriginal Organisations wishes in regards to human burials must be respected and any strategy must be undertaken with their consent and respect for cultural values.
- A forensic archaeologist will be engaged to assess the burials and oversee excavation (if required) and to assist in the formulation of management strategies. Biosis staff trained in forensic archaeology and biological anthropology will be responsible for this step in the procedure.
- If reburial is undertaken, any reburial site must be fully documented, clearly marked and all details provided to ACT Heritage Council; and appropriate management measures must be implemented to ensure that the remains are not disturbed in the future.
- Any cultural ceremonies associated with the reburial of remains must be undertaken at a cost to the proponent.

References

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Hogan, K. 1992. Historical cultural Landscapes: Avonley woolshed, pastoral landscape study. Report to University of Canberra.

Phillip Cox and Partners 1982. Yarralumla Woolshed and outbuildings: Conservation Management Plan. Prepared for the Department of Transport and Construction ACT Region.

ACT Heritage Register Entry – Yarralumla Woolshed, outbuildings and associated grounds.

ACT Heritage Register Entry – Belconnen Farm

ACT Heritage Register Entry 20110 – Orroral Valley Woolshed

ACT Heritage Register Entry 20040 – Duntroon Woolshed

ACT Heritage Register Entry 20159 – Elm Grove Homestead

ACT Heritage Register Entry – Horse Park homestead

ACT Heritage Register Entry 20031 – Huntley Homestead

ACT Heritage Register Entry – Callum Brae Homestead

ACT Heritage Register Entry – Tennant Homestead

Figures - Partially Redacted

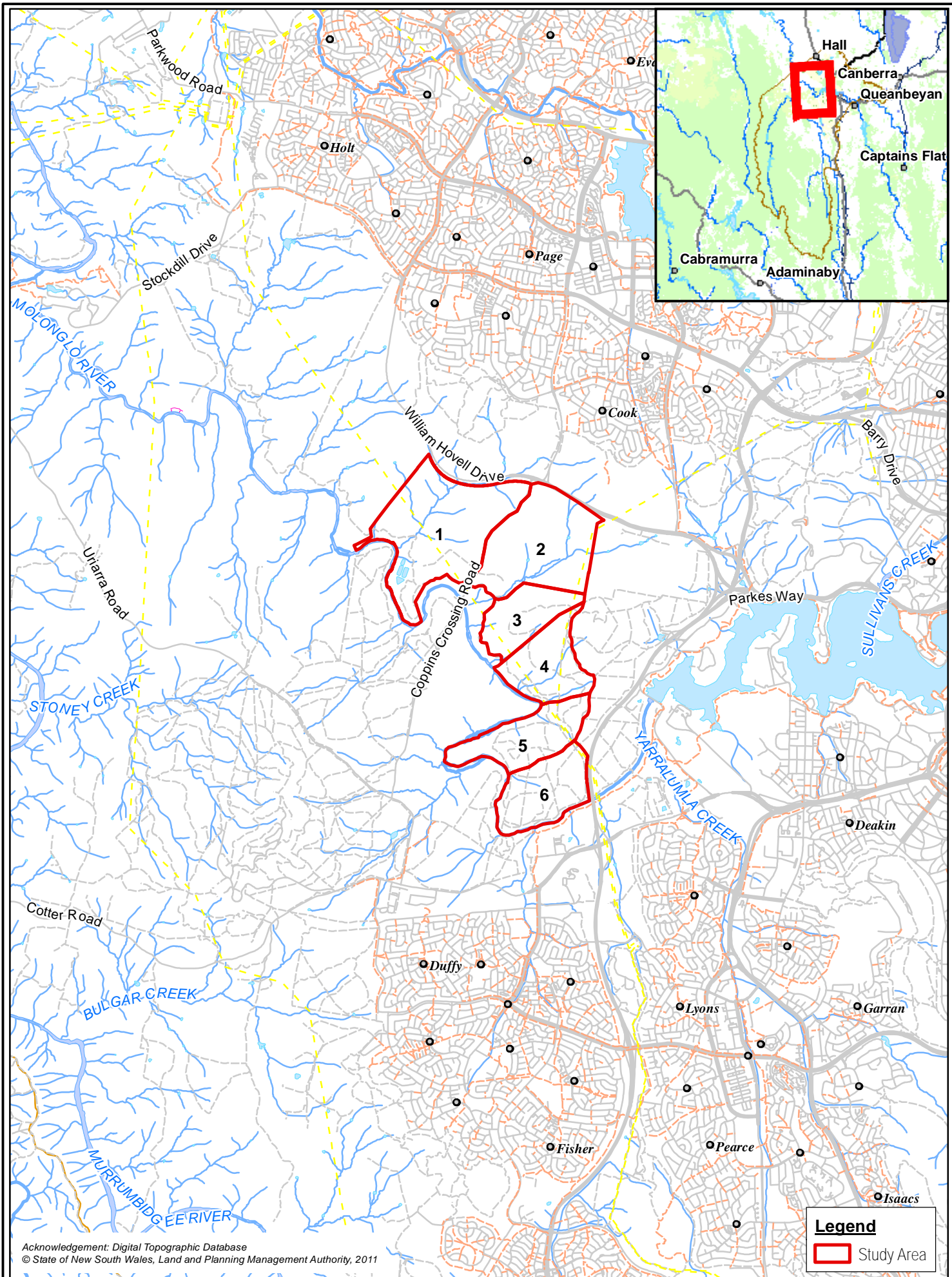
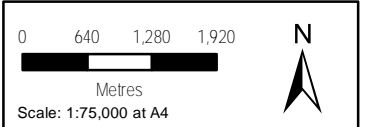
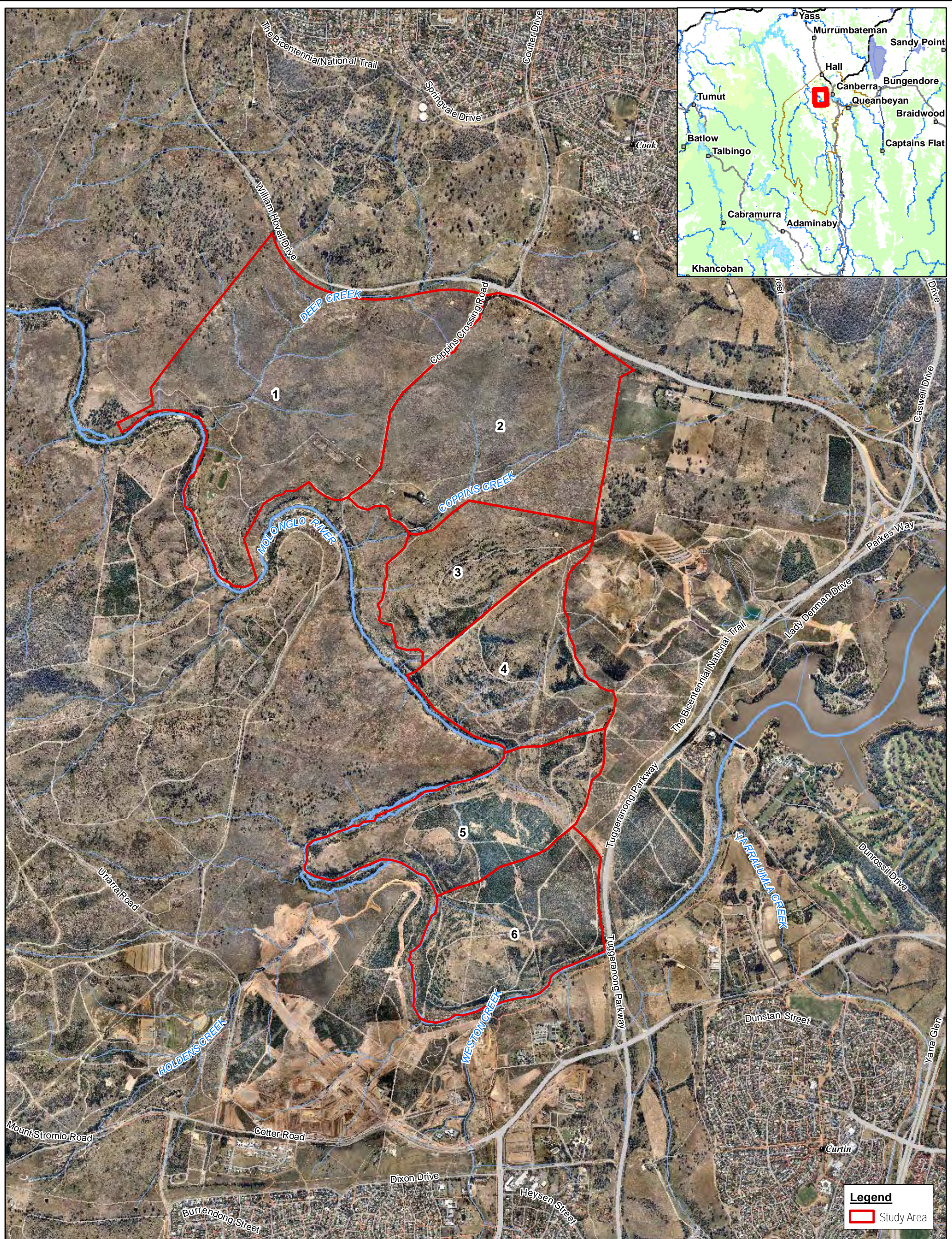


Figure 1: Location of the Study Area

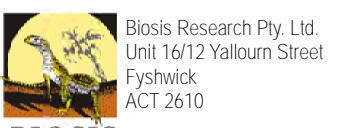
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 Ballarat, Melbourne,
 Wollongong, Wangaratta.



Legend
 Study Area

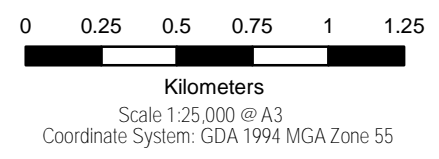


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Figure 2: Study Area

Acknowledgements: Digital Topographic Database © State of New South Wales, Land and Planning Management Authority, 2011, Aerial Imagery - NearMap 2011
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Appendices

Appendix 1: Aboriginal Community Comment - redacted

Appendix 2: Lithic Attributes - Redacted

Appendix 3: Soil Profiles

Area 1 - TP 1



Area 1 - TP 2



Area 1 - TP 3



Area 1 - TP 4



Area 1 - TP 5



Area 1 - TP 6



Area 1 - TP 7



Area 1 - TP 8



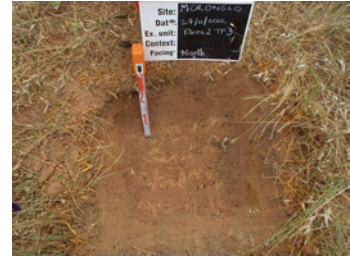
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Area 2 - TP 2



Area 2 - TP 3



Area 2 - TP 4



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Area 2 - TP 6



Area 2 - TP 7



Area 2 - TP 8



Area 3 - TP 1



Area 3 - TP 2



Area 3 - TP 3



Area 3 - TP 4



Area 3 - TP 5



Area 3 - TP 6



Area 3 - TP 7



Area 3 - TP 8



Area 4 - TP 1



Area 4 - TP 2



Area 4 - TP 3



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Area 5 - TP 3



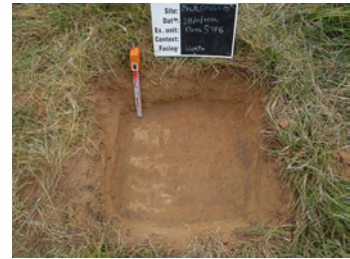
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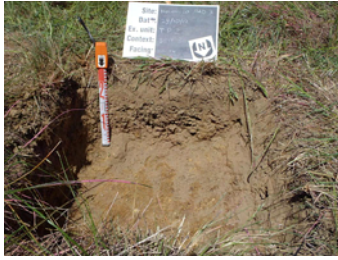
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PAD 2 -TP 2



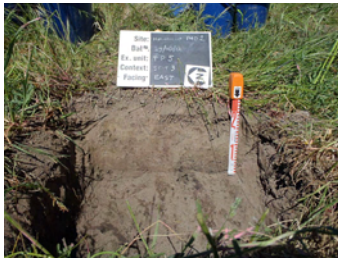
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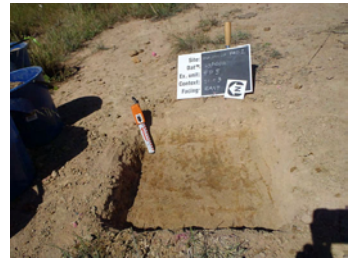
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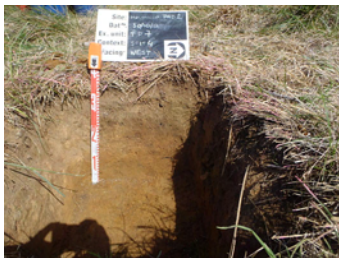
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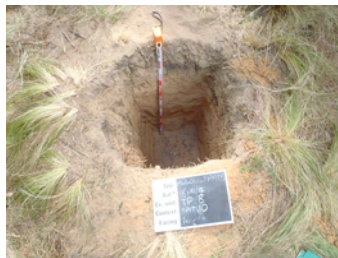
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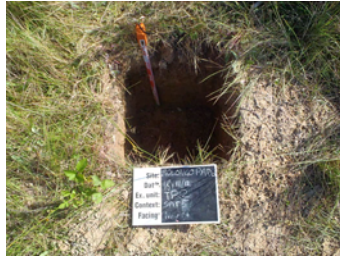
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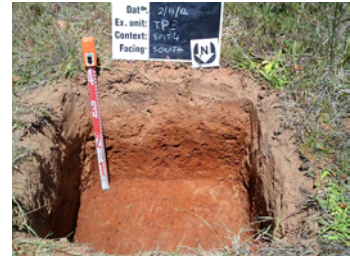
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Appendix 4: Cultural Area - Redacted

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Appendix 5: Legislation

Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999

In January 2004 the Commonwealth *Australian Heritage Commission Act 1975* was repealed and in its place amendments to the EPBC Act were made. The amendments were contained in three new pieces of Commonwealth Heritage Legislation. The three new Acts are the:

1. Environment and Heritage Legislation Amendment Act (No. 1) 2003 which:
 - (a) amends the Environment Protection and Biodiversity Conservation Act 1999 to include 'national heritage' as a new matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution
 - (b) establishes the National Heritage List
 - (c) establishes the Commonwealth Heritage List
2. Australian Heritage Council Act 2003 which establishes a new heritage advisory body to the Minister for the Environment and Heritage, the Australian Heritage Council, and retains the Register of the National Estate.
3. Australian Heritage Council (Consequential and Transitional Provisions) Act 2003 which repeals the Australian Heritage Commission Act, amends various Acts as a consequence of this repeal and allows for the transition to the new heritage system.

Any place that has been nominated and assessed as having cultural heritage significance at a national level can be added to the National Heritage List. 7

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) an action requires approval from the Federal Environment Minister if the action will, or is likely to, have a significant impact on a matter of national environmental significance. Matters of national environmental significance relating to cultural heritage are:

- World Heritage Places, and
- National Heritage Places.

An action includes a project, development, undertaking, activity, or series of activities.

Actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land), and actions taken by the Commonwealth that are likely to have a significant impact on the environment anywhere in the world, may also require approval under the EPBC Act.

Native Title Act 1993

The Commonwealth Native Title Act establishes the principles and mechanisms for the preservation of Native Title for Aboriginal people.

Under Subdivision P of the Act, *Right to negotiate*, native title claimants can negotiate about some proposed developments over land and waters (known as 'Future Acts') if they have the right to negotiate. Claimants gain the right to negotiate if their native title claimant application satisfies the registration test conditions.

The right to negotiate applies over some proposed developments or activities that may affect native title. These are known as future acts under the Native Title Act 1993. Native title claimants only have the right to negotiate over certain types of

future acts, such as mining. Activities such as exploration and prospecting on the land do not usually attract the right to negotiate.

The right to negotiate is not a right to stop projects going ahead — it is a right to have a say about how the development takes place. In some situations, the right to negotiate does not apply. In these circumstances, claimants may have the right to be notified, to be consulted, to object and to be heard by an independent umpire.

The right to negotiate is triggered when a government issues a notice to say that it intends to allow certain things to happen on land, such as granting a mining lease. This notice is called a 'section 29 notice'.

People who claim to hold native title in the area, but have not yet made a native title claimant application, have three months from the date given in the section 29 notice to file a claim if they want to have a say about the proposed development. To get the right to negotiate, the claim must be registered within a month after that.

If the right to negotiate applies, the government, the developer and the registered native title parties must negotiate 'in good faith' about the effect of the proposed development on the registered native title rights and interests of the claimants.

The parties can ask the National Native Title Tribunal to mediate during the negotiations.

If the negotiations do not result in an agreement the parties can ask the Tribunal (no sooner than six months after the notification date) to decide whether or not the future act should go ahead, or on what conditions it should go ahead.

The National Native Title Tribunal administers the future act processes under the Commonwealth legislation. The Tribunal's role includes mediating between parties, conducting inquiries and making decisions (called 'future act determinations') where parties can't reach agreements.

When the Tribunal receives a future act determination application, it must conduct an inquiry (an arbitration) in order to determine whether the future act can be done and if so whether any conditions should be imposed.

A member of the Tribunal (or a panel of three members) will be appointed to conduct the inquiry, and will initially hold a preliminary conference and set directions for the parties to provide submissions and evidence. Members who have mediated a particular matter are not usually appointed as inquiry members. Inquiry members conduct hearings, receive submissions and evidence from the parties and take into account matters set out in section 39 of the Native Title Act such as:

- the effect of the future act on the enjoyment by the native title party of their registered native title rights and interests; their way of life, culture and traditions; the development of their social, cultural and economic structures; their freedom of access to the land and freedom to conduct ceremonies and other cultural activities; and the effect of the future act on any area or site of particular (special) significance to the native title party;
- the interests, proposals, opinions or wishes of the native title party;
- the economic or other significance of the future act;
- the public interest; and
- the presence of any existing non-native title rights and interests and use of the land by other persons (for instance, pastoralists).

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides protection for Aboriginal cultural property. Whereas the Territory Act provides legal protection for all the physical evidence of past Aboriginal occupation, the Commonwealth Act deals with Aboriginal cultural property in a wider sense. Such cultural property includes any places, objects and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'. There is no cut-off date and the Act may apply to contemporary Aboriginal cultural property as well as ancient sites.

Protection of Movable Cultural Heritage Act 1986

Australia's movable cultural heritage is protected at both Commonwealth and State levels. This web site only provides information on the Commonwealth laws.

In 1970 the United Nations Educational, Scientific and Cultural Organisation (UNESCO) adopted the UNESCO Convention on the Means of Prohibiting the Illicit Import, Export and Transfer of Ownership of Cultural Property. Australia ratified the convention by passing the *Protection of Movable Cultural Heritage Act 1986* (the Act), giving the 1970 Convention force in Australian law.

The Act regulates the export of Australia's significant cultural heritage objects. It is not intended to restrict normal and legitimate trade in cultural property and does not affect an individual's right to own or sell within Australia.

It implements a system of export permits for certain heritage objects defined by the Act as 'Australian protected objects'. Australian protected objects are objects which form part of the movable cultural heritage of Australia and which meet the criteria established under the National Cultural Heritage Control List. The Control List is located in the Regulations to the Act, and divides Australian protected objects into two classes:

- Class A objects which may not be exported
- Class B objects which may be exported if granted a permit under the Act.

A person wishing to export a Class B object is required to apply for a permit in writing. Applications are processed in accordance with the legislative process established under section 10 of the Act.

Certificates of Exemption, granted under section 12 of the Act, allow Australian protected objects that are currently overseas to be imported into Australia and subsequently re-exported. This includes Class A objects.

The Act also includes provisions that allow Australia to respond to an official request by a foreign government to return movable cultural heritage objects that have been illegally exported from their country of origin.

The *Protection of Movable Cultural Heritage Act 1986* is administered by the Minister for the Environment and Heritage. This responsibility was transferred from the Minister for Communication, Information Technology and the Arts in November 2001.

The Movable Cultural Heritage Unit in the Department of the Environment and Heritage provides the Secretariat to the National Cultural Heritage Committee

Territory Legislation

ACT Heritage Act 2004

The ACT Heritage Act 2004 (The Act) contains provisions for the protection and conservation of heritage places and objects in the Territory. It also contains provisions for the establishment of the Heritage Council and the Heritage Register. The Act defines registration processes for entry of significant heritage places and objects on to the Register; provides heritage guidelines, describes offences relating to damaging heritage; prescribes heritage directions and enforcement; describes the obligations of public authorities; and the incentives for heritage conservation.

The Act covers natural and cultural heritage including Aboriginal heritage. It deals with both heritage places and objects. Under Part 2 Clause 8 of The Act “objects” include equipment, furniture, fittings and articles at, or historically or physically associated with, the place.

The ACT Heritage Council maintains the Heritage Register. A listing on the Register means that the place or object fulfills the criteria outlined in Part 2 Sections 8 to 12 of The Act. In summary, this means that a place or object is:

- of particular importance to the people of the ACT and enriches the understanding of history and identity;
- is legally protected under the Heritage Act 2004 including the application of Heritage Guidelines;
- requires advice by the ACT Heritage Council on development issues to improve conservation outcomes.

Under Clause 49 of the ACT Heritage Act 2004, a person who discovers a place or object and has reasonable grounds for believing it is an Aboriginal place or object, is required to report the discovery to the Heritage Council within one week after the discovery. It is an offence of strict liability to contravene this section. Punishable actions taken against historic heritage and Aboriginal heritage are defined in Part 13 s 72 and 73 of The Act. In summary they are nominated as any actions taken to diminish the heritage significance of a place or object, and, any actions taken to damage an Aboriginal place or object.

The ACT Heritage Register

The ACT Heritage Council is responsible for maintaining the register. Places and objects listed on the Register are legally protected under the ACT Heritage Act 2004, and require approval from the ACT Heritage Council prior to undertaking work that results in their alteration or modification.

Glossary

Introduction and terminology

The glossary provides definitions of various terms used in this report. Some terms have been referenced and the sources included in the reference list at the end of this report.

There is often a degree of confusion about the use of terms such as *heritage place*, *historical site*, *archaeological site*. The definitions of these terms, as used in this report, have been included in the glossary and their relationship outlined in **Figure G1** below. The term used most consistently is *heritage place*. For the purpose of discussion in this plan 'heritage place' can be sub-divided into **Aboriginal place** and **historic place** (i.e. a historic place refers more particularly to non-Aboriginal sites).

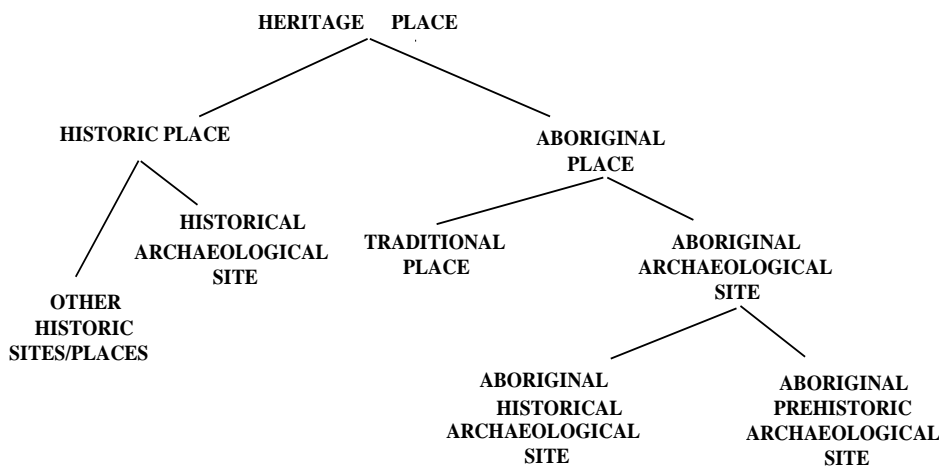


Figure G1: Terminology used for categories of heritage places.

Archaeological site types

The archaeological site types encountered in Australia can be divided into three main groups:

Historical archaeological site: an archaeological site formed since non-Aboriginal settlement that contains physical evidence of past human activity (for example a structure, landscape or artefact scatter).

Aboriginal historical archaeological site (or contact site): a site with a historical context such as an Aboriginal mission station or provisioning point; or a site that shows evidence of Aboriginal use of non-Aboriginal materials and ideas (for example: artefact scatter sites that have artefacts made from glass, metal or ceramics).

Aboriginal prehistoric archaeological site: a site that contains physical evidence of past Aboriginal activity, formed or used by Aboriginal people either before, or not long after, European settlement. These sites are commonly grouped as follows (further definition of each is contained in the glossary list):

- artefact scatter
- mound
- structures
- burial
- quarry
- rock art
- hearth
- scarred tree
- rock shelter
- isolated artefact
- shell midden
- rock well

One of the most common artefact types that provides evidence of Aboriginal people are those made from stone. Types and categories are outlined below in **Figure G2**, with further definition of each in the glossary list.

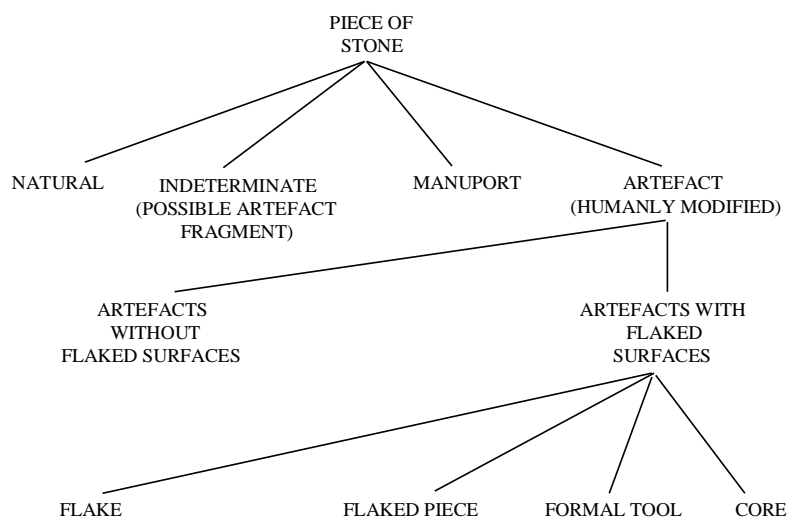


Figure G2: Stone artefact types/categories.

List of definitions

Aboriginal historical archaeological site (or contact site): either a site with an historic context such as an Aboriginal mission station or provisioning point; or a site that shows evidence of Aboriginal use of European/non-Aboriginal materials and ideas (e.g. artefact scatter sites that contain artefacts made from glass, metal or ceramics).

Aboriginal prehistoric archaeological site: a site that contains physical evidence of past Aboriginal use, formed or used by Aboriginal people either before, or not long after, European settlement.

Alluvial terrace: a platform created from deposits of alluvial material along river banks.

Angular fragment: a piece of stone that is blocky or angular, not flake-like.

Archaeology: the study of the remains of past human activity.

Artefact scatter: a surface scatter of cultural material. Artefact scatters are often the only physical remains of places where people have lived camped, prepared and eaten meals and worked.

Backed piece: a flake or blade that has been abruptly retouched along one or more margins opposite an acute (sharp) edge. Backed pieces include backed blades and geometric microliths. They are thought to have been hafted onto wooden handles to produce composite cutting tools. Backed pieces are a feature of the 'Australian small tool tradition', dating from between 5000 and 1000 years ago in southern Australia (Mulvaney 1975; Holdaway and Stern, 2004).

Blade: a flake at least twice as long as it is wide.

Burial site: usually a sub surface pit containing human remains and sometimes associated artefacts.

Contact site: see 'Aboriginal historical archaeological site'.

Core: an artefact from which flakes have been detached using a hammerstone. Core types include single platform, multi-platform and bipolar forms.

Cortex: original or natural (unflaked) surface of a stone.

Cortical: refers to the cortex.

Flake: a stone piece removed from a core by percussion (striking it) or pressure. It is identified by the presence of a striking platform and bulb of percussion, not usually found on a naturally shattered stone.

Flaked piece: a piece of stone with definite flake surfaces, which cannot be classified as a flake or core.

Formal tool: an artefact that has been shaped by flaking, including retouch, or grinding to a predetermined form for use as a tool. Formal tools include scrapers, backed pieces and axes.

GDA94 or Geocentric Datum of Australia 1994: a system of latitudes and longitudes, or east and north coordinates, centred at the centre of the earth's mass. GDA94 is compatible with modern positioning techniques such as the Global Positioning System (GPS). It supersedes older coordinate systems (AGD66, AGD84). GDA94 is based on a global framework, the IERS Terrestrial Reference Frame (ITRF), but is fixed to a number of reference points in Australia.

Geometric microlith: a small tool that has been fashioned from breaking apart a microblade. The piece is then retouched or backed and a small tool formed.

Grindstones: upper (handstone) and lower (basal) stones used to grind plants for food and medicine and/or ochre for painting. A handstone sometimes doubles as a hammerstone and/or anvil.

Ground Surface Visibility: the degree to which the surface of the ground can be seen. This may be influenced by natural processes such as wind erosion or the character of the native vegetation, and by land-use practices, such as ploughing or grading. Visibility is generally expressed in terms of the percentage of the ground surface visible for an observer on foot (Bird 1992).

Hearth: usually a sub surface feature found eroding from a river or creek bank or a sand dune - it indicates a place where Aboriginal people cooked food. The remains of a hearth are usually identifiable by the presence of charcoal and sometimes clay balls (like brick fragments) and hearth stones. Remains of burnt bone or shell are sometimes preserved within a hearth.

Heritage Place: A place with aesthetic, historic, scientific or social values for past, present or future generations – ‘...this definition encompasses all cultural places with any potential present or future value as defined above’ (Pearson and Sullivan 1995:7).

Historic place: a place that has some significance or noted association in history.

Historical archaeological site: an archaeological site formed since non-Aboriginal settlement that contains physical evidence of past human activity (for example a structure, landscape or artefact scatter).

Isolated artefact: Discrete, low density site of less than 5 artefacts. It/they can be evidence of a short-lived (or one-off) activity location, the result of an artefact being lost or discarded during travel, or evidence of an artefact scatter that is otherwise obscured by poor ground visibility.

Manuport: foreign fragment, chunk or lump of stone that shows no clear signs of flaking but is out of geological context and must have been transported to the site by people.

Map Grid of Australia (MGA): The official coordinate projection for use with the Geocentric Datum of Australia 1994 (GDA94).

Mound: these sites, often appearing as raised areas of darker soil, are found most commonly in the plains or on higher ground near bodies of water. The majority were probably formed by a slow build-up of debris resulting from earth-oven cooking; although some may have been formed by the collapse of sod or turf structures. It has also been suggested some were deliberately constructed as hut foundations (Bird and Frankel 1991: 7–8).

Percussion: the act of hitting a core with a hammerstone to strike off flakes.

Platform preparation: removal of small flake scars on the dorsal edge of a flake, opposite the bulb of percussion. These overhang removal scars are produced to prevent a platform from shattering (Hiscock 1986: 49).

Pre-contact: before contact with non-Aboriginal people.

Post-contact: after contact with non-Aboriginal people.

Quarry (stone/ochre source): a place where stone or ochre is exposed and has been extracted by Aboriginal people. The rock types most commonly quarried for artefact manufacture in south-eastern Australia include silcrete, quartz, quartzite, chert and fine-grained volcanics such as greenstone.

Rejuvenation flake: a flake that has been knapped from a core solely for the purpose of preparing a new platform and making it easier to get flakes off a core, as it reduces the angle between platform and core surface.

Retouch: a flake, flaked piece or core with intentional secondary flaking along one or more edges.

Rock art: 'paintings, engravings and shallow relief work on natural rock surfaces' (Rosenfeld 1988: 1). Paintings were often produced by mineral pigments, such as ochre, combined with clay and usually mixed with water to form a paste or liquid that was applied to an unprepared rock surface. Rock engravings were made by incising, pounding, pecking or chiselling a design into a rock surface. Rare examples of carved trees occasionally survive.

Rock shelter: may contain the physical remains of camping places where people prepared meals, flaked stone, etc. They are often classed as a different type of site due to their fixed boundaries and greater likelihood of containing sub surface deposits. Rockshelters may also contain rock art.

Scarred tree: scars on trees may be the result of removal of strips of bark by Aborigines e.g. for the manufacture of utensils, canoes or for shelter; or resulting from small notches chopped into the bark to provide hand and toe holds for hunting possums and koalas. Some scars may be the result of non-Aboriginal activity, such as surveyors' marks.

Scraper: a flake, flaked piece or core with systematic retouch on one or more margins. Scraper types follow Holdaway and Stern (2004).

Shell midden: a surface scatter and/or deposit comprised mainly of shell, sometimes containing stone artefacts, charcoal, bone and manuports. These site types are normally found in association with coastlines, rivers, creeks and swamps – wherever coastal, riverine or estuarine shellfish resources were accessed and exploited.

Significance: the importance of a heritage place or site for aesthetic, historic, scientific or social values for past, present or future generations.

Striking platform: the surface of a core, which is struck by a hammerstone to remove flakes.

Structures (Aboriginal): can refer to a number of different site types, grouped here only because of their relative rarity and their status as built structures. Most structures tend to be made of locally available rock, such as rock arrangements (ceremonial and domestic), fishtraps, dams and cairns, or of earth, such as mounds or some fishtraps.

Stratified deposit: material that has been laid down, over time, in distinguishable layers.

Transect: A fixed path along which one records archaeological remains.

Utilised artefact: a flake, flaked piece or core that has irregular small flake scarring along one or more margins that does not represent platform preparation.