

40 MEMORIAL AVENUE, BELLA VISTA, NSW

# ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN

LGA: The Hills Shire

March 2025





Apex Archaeology acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation and in whose land this assessment took place, and to the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples.

## DOCUMENT CONTROL

The following register documents the development and issue of the document entitled '40 Memorial Ave, Bella Vista, NSW: Aboriginal Cultural Heritage Management Plan', prepared by Apex Archaeology in accordance with its quality management system.

Revision	Prepared by	Reviewed by	Comment	Issue Date
1 – Draft	Peta Rice	Leigh Bate	Draft issued to Client	28 March 2025



## GLOSSARY OF TERMS

<b>Aboriginal Object</b>	An object relating to the Aboriginal habitation of NSW (as defined in the NPW Act), which may comprise a deposit, object or material evidence, including Aboriginal human remains.
<b>ACHA</b>	Aboriginal Cultural Heritage Assessment
<b>ACHMP</b>	Aboriginal Cultural Heritage Management Plan
<b>AHIMS</b>	Aboriginal Heritage Information Management System maintained by Heritage NSW, detailing known and registered Aboriginal archaeological sites within NSW
<b>AHIP</b>	Aboriginal Heritage Impact Permit
<b>BP</b>	Before Present, defined as before 1 January 1950.
<b>Code of Practice</b>	The DECCW September 2010 <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>
<b>Consultation</b>	Aboriginal community consultation in accordance with the DECCW April 2010 <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> . Consultation is not a required step in a due diligence assessment; however, it is strongly encouraged to consult with the relevant Local Aboriginal Land Council and to determine if there are any Aboriginal owners, registered native title claimants or holders, or any registered Indigenous Land Use Agreements in place for the subject land
<b>DA</b>	Development Application
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water
<b>DCP</b>	Development Control Plan
<b>GSV</b>	Ground Surface Visibility
<b>GTAs</b>	General Terms of Approval
<b>Harm</b>	To destroy, deface or damage an Aboriginal object; to move an object from land on which it is situated, or to cause or permit an object to be harmed
<b>Heritage NSW</b>	Heritage NSW in the Department of Climate Change, Energy, the Environment and Water – responsible for heritage matters in NSW
<b>LALC</b>	Local Aboriginal Land Council
<b>LGA</b>	Local Government Area
<b>LEP</b>	Local Environmental Plan
<b>NPW Act</b>	NSW <i>National Parks and Wildlife Act 1974</i>
<b>OEH</b>	The Office of Environment and Heritage – now Heritage NSW
<b>RAPs</b>	Registered Aboriginal Parties



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## 1.0 INTRODUCTION

Subsequent to the preparation of an Aboriginal Cultural Heritage Assessment (ACHA) for a proposed residential development at 40 Memorial Avenue, Bella Vista and construction of a bridge over Elizabeth Macarthur Creek at the end of Hodges Street, Bella Vista (the study area), an Aboriginal Cultural Heritage Management Plan (ACHMP) was required to provide guidance for the management of AHIMS site NWRL 7 (AHIMS #45-5-4262/45-5-4841) located within the study area. Apex Archaeology was engaged to prepare the required ACHMP, which is outlined in this report.

This document outlines the site within the study area and the management principles which apply.

### 1.1 STUDY AREA

The project is located within The Hills Shire Local Government Area (LGA). The study area is legally defined as Lot 1 DP 1180837 and part of Lot 403 DP 1125136. The area is approximately 2 ha in size and is bound by Memorial Avenue to the north, vacant blocks to the east and south, and an unnamed access road runs parallel to the western boundary. The investigation area comprises the entirety of the study area.

### 1.2 PURPOSE

This ACHMP has been prepared to address the requirement of cultural heritage management to be considered in the construction and development of the study area, and ensure sites are managed appropriately during the construction period.

The document has been designed to minimise impacts from development activities within the study area on Aboriginal cultural heritage by describing strategies for the management of Aboriginal sites during the undertaking of these activities.

Specifically, the ACHMP has been developed in order to:

- Fulfil the Secretary's Environmental Assessment Requirements (SEARs);
- Establish appropriate measures to avoid, minimise, or mitigate identified impacts;
- Outline the protection that will be established for sites which should be avoided;
- Document the roles and responsibilities of the proponent, their contractors, the community, and RAPs, during each stage of the development and into the future;
- Detail the results of the Aboriginal community consultation undertaken for the project, and to provide guidelines for future consultation with RAPs for the project; and
- Document the tasks that must be completed to ensure long term protection of the Aboriginal cultural heritage values of the area designated for protection.



Study Area

Lot Boundaries

Hydrology

<p>PO Box 236 NOWRA NEW SOUTH WALES 2541</p>	<p>0 100 200</p> <p>Meters</p>	<p>Projection: MGA Zone 56 (GDA 94) Base Map: NearMaps 2023 Image Date: 18/01/2023 Final - Version 1</p>	<p>Figure 1: General location of the study area in its local context.</p>	
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## 1.1 PROJECT BRIEF

It is proposed to construct two multi-dwelling buildings within the study area with basement car parking, along with construction of a bridge and approach road at the corner of Free Settlers Drive and Hodges Road. This will also include the installation of services, including sewerage, electricity and town water. There are three registered sites within 50 m of the study area, comprising AHIMS #45-5-3063 (Burns Road Compound), AHIMS #45-5-4262 (NWRL PAD7) and AHIMS #45-5-4841 (NWRL PAD7) that are all listed as Potential Archaeological Deposits (PAD). However, AHIMS #45-5-4262 and AHIMS #45-5-4841 are the same site that has been recorded twice under different numbers. As these are mapped as being on and near the southwest corner of the study area and includes an area of PAD that extends across the southern section of the study area, test excavation within this area was undertaken as part of the ACHA process. This ACHMP builds on the results of the testing program and outlines further management necessary prior to the commencement of construction works.

Prior to preparation of the ACHAR for the current project, a previous archaeological salvage excavation was undertaken by Kelleher Nightingale Consultants (KNC). This was undertaken in 2013, with a salvage report issued in 2015 in relation to AHIMS #45-5-4262 (NWRL PAD7) PAD. The portion of the PAD excavated was in close proximity to the southern boundary of the current study area and a total of 2,893 artefacts were recovered, including a number of stone-tool types. The site was dated to approximately 4,000 years ago. The remainder of PAD that extends into Lot 1 DP1237055 and Lot 1 DP1180837 of the current area was *not* included in the KNC salvage report and it was stated in the updated AHIMS site card #45-5-4262 submitted by KNC that the 'remaining portion of the site is likely to have a similar archaeological deposit and would require an Aboriginal Heritage Impact Permit prior to any impact'. This remaining site *is* within the current study area.

A due diligence report was undertaken by McCardle Heritage for 40 Memorial Avenue in 2022 for the proposed residential development. The investigation assessed the site as having no potential. However, this assessment did not take into consideration the abundance of archaeological material found in the surrounding areas during comprehensive excavations in relatively undisturbed contexts.

Apex Archaeology was engaged in 2022 to undertake an Aboriginal due diligence assessment for the portion of the current project area between Hodges Road and Free Settlers Drive for the proposed construction of a new bridge in relation to 40 Memorial Avenue. During the background investigation it became apparent that AHIMS #45-5-4262 (NWRL 7) PAD extended into this area of investigation, as well as across the entire southern boundary of 40 Memorial Avenue. As such, it was recommended that 40 Memorial Avenue also be reassessed and that the remaining area of AHIMS #45-5-4262 (NWRL 7) be subject to an ACHA and archaeological test excavations to determine the condition of the site and to identify the nature and



extent of any sub surface cultural material that may be present. This was also the recommendations provided by the consultants that initially identified the site and KNC that undertook archaeological salvage excavations.

## **1.2 STATUTORY CONTEXT**

The proposed works will be assessed as a State Significant Development Application (SSDA) under Part 4 Division 4.7 of the *Environmental Planning and Assessment Act 1979*. This report will be included as part of the Environmental Impact Statement (EIS) for the SSDA and has been prepared in anticipation of the SEARs for the project.

Under Part 4, division 4.7 State Significant Development of the EP&A Act, there is no requirement to obtain consent from Heritage NSW under the provisions of s.90 of the NPW Act. Instead, an ACHMP guides the management of Aboriginal cultural values within the study area.

## **1.3 PREVIOUS ARCHAEOLOGICAL ASSESSMENT**

### **1.3.1 GML & JMcD CHM 2012**

GML & JMcD CHM undertook an Aboriginal heritage study for the major civil construction works component of the North West Rail Link (NWRL) that incorporated eight new stations including Bella Vista and Kellyville. A total of 27 Aboriginal sites and areas of PADs were identified during the investigation, including two PADs in close proximity to the current study area, comprising AHIMS #45-5-4262 (NWRL PAD 7) and AHIMS #45-5-4261 (NWRL PAD 9). It was recommended that both of these be subject to subsurface archaeological testing, and they are discussed below.

AHIMS #45-5-4262 (NWRL PAD 7) was identified during a pedestrian survey between Balmoral Road to Memorial Avenue. Although there was little ground surface visibility due to dense grass cover, the area, except for building constructions, was considered to have been subject to a low level of disturbance. The ridge top, hill slope and flat landforms (overlooking Macarthur Creek) were considered to have the potential for relatively undisturbed archaeological deposits and an area of PAD was identified and registered as NWRL PAD 7 AHIMS #45-5-4262. A portion this site is within the current study area.

AHIMS #45-5-4261 (NWRL PAD 9) was another area that was identified on the pedestrian survey that was conducted from Memorial Avenue to Samantha Riley Drive. A raised landform overlooking Elizabeth Macarthur Creek was considered to have moderate archaeological potential for undisturbed archaeological deposits, and was also in close proximity to a previously registered site that contained an isolated stone artefact.

### **1.3.2 KELLEHER NIGHTINGALE CONSULTING 2015**

KNC was engaged to undertake an archaeological salvage for the Sydney Metro Northwest infrastructure project for Transport NSW. The project involved a 23



kilometre rail link to Sydney's North West region and included the construction of eight new railway stations at Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road, twin 15 kilometre tunnels from Bella Vista and Rouse Hill and 4,000 commuter car parking spaces.

Archaeological salvage was undertaken to mitigate the impact of project construction on the 27 Aboriginal archaeological sites identified in the Aboriginal heritage technical report. The archaeological salvage program commenced early in the overall Sydney Metro Northwest construction program. KNC salvaged 24 of the identified Aboriginal archaeological sites between Bella Vista and the stabling area at Tallawong Road at the western extent of the project. The archaeological salvage of the remaining three sites in the eastern portion between Epping and Showgrounds Station was undertaken by RPS Australia East Pty Ltd (RPS).

The salvage program for the 24 identified sites between Bella Vista Station and Tallawong Road involved the hand excavation of 1,168m<sup>2</sup> of soil resulting in the recovery of 13,019 artefacts, including 250 backed artefacts and a ground-edged axe. Around 90% of all artefacts were made from red silcrete. It was proposed that the salvage areas described a domestic picture, an industry of tool production, and a series of selective activity areas ranging from exploration camps to strategic landscapes. Many of the excavated archaeological sites displayed a continuity of places through time.

A total of seven radiocarbon samples were analysed and it was found that the occupation dates ranged from 4,385 years ago to 570 years ago.

At three of the identified Aboriginal archaeological sites, project impacts were limited through design changes, resulting in large portions of these sites to be outside the study area. It was recommended that relevant approvals and associated salvage activities would be required prior to any impact to these remaining sites/portions of sites in accordance with project approvals. Two of the salvages were to the south of the current study area and are discussed separately below.

#### **Details of the salvage of AHIMS #45-5-4262 (PAD NWRL 7)**

The KNC investigation included a study area that was bordered by Old Windsor Road to the west, Memorial Avenue to the north, the current study area to the east, and the AHIMS #45-5-3354 (BRO1) archaeological salvage site to the south. Two Aboriginal sites were identified within this area and both were listed as Potential Archaeological Deposits (PADs) that were originally identified in 2012 by Godden Mackay Logan and Jo McDonald Heritage Consultancies as AHIMS #45-5-4262 and AHIMS #45-5-4841 discussed above.

However, these sites are registered under the same site name (NWRL 7) but with different site ID numbers, AHIMS #45-5-4262 and AHIMS #45-5-4841. They are duplicates of the same site and are mapped as being on, and within 20 m



(respectively), of the southwest boundary of the current study area. For the purpose of KNC salvage excavation summary, this duplicate site will be referred to as AHIMS #45-5-4262. Although KNC identified that the whole PAD also extends into the current study area, as seen in Figure 6 below, only the portion of the PAD within KNC's study area was subject to salvage.

The PAD site AHIMS #45-5-4262 was positioned on the lower and mid slopes of Elizabeth Macarthur Creek. The excavation involved two phases and was focused on these lower creek slopes, as the western portion of the PAD (upslope) had suffered erosion and most of the A soil horizon, which is typically the artefact-bearing horizon, was missing. Phase one included the excavation of 13 m<sup>2</sup> and a total of 34 stone artefacts were retrieved. One of the squares that was positioned 40 m above the creek on a remnant terrace yielded 20 artefacts. Based this high artefact count, phase two was centred around this square and an area of 99 m<sup>2</sup> was excavated, resulting in 2,859 stone artefacts been recovered.

The artefacts were mainly made from silcrete, which comprised 90% of the assemblage, but other stone including grey silicified tuff, chert, medium-grained silicious material and petrified wood was also used. The artefact types comprised 83 cores, along with tools/implements including recognised tool types and flakes that had evidence of being used, either through further modification or signs of use wear. These included 72 backed artefacts, 7 geometric artefacts, 6 Elouera scrapers, 1 hammerstone fragment, 65 flakes with retouch and 5 with signs of usewear.

The remaining 2,688 artefacts comprised of various flakes that are by-products of the tool-making process. However, these flakes did establish there were two types of manufacturing taking place. One is the percussion method, whereby stone is held in one hand and hit with another stone (hammerstone) to remove flakes. The other is referred to as bi-polar knapping and involves positioning stone on an anvil and hitting it with another rock to remove flakes. This was generally used on small pieces of stone that are difficult to hold by hand such as quartz.

There were three peak density zones recorded over the Phase 2 excavation. These were from three adjoining squares and contained over 200 hundred artefacts each. Charcoal samples were also taken from this area to determine dates for these knapping events. One sample resulted in a date of 3,657 +/- 22 BP.

KNC concluded that the AHIMS #45-5-4262 (NWRL PAD7) site was a focused silcrete reduction site that was part of a larger silcrete production process. It most probably functioned as the middle stage of the process where rocks that had already been procured were taken here for further modification. This was seen in the amount of moderate sized silcrete flakes and the proportion of modified flakes and cores. It would probably not have been involved in the late stage of backed-artefact production.

Additionally, KNC observed that the geomorphic processes of the area underscored the survivability of the deposit within this salvage area. The gradient on the upper slope discouraged the deposition and prevented the accumulation of archaeological deposit. However, the terrace containing the artefact-bearing open area was situated just high enough to be above the flood channel. It was in ‘the cultural sweet spot: close enough to resources to encourage occupation, but isolated enough to facilitate the survival of cultural material through time’ (KNC 2015: 122).



Figure 2: KNC study boundary in yellow, PAD (NWRL PAD 7) shaded in blue and current study area outlined in red.

### Details of the salvage of AHIMS #45-5-3354 (BRO1) area

The KNC investigation also included a study area that was bordered to the north by AHIMS #45-24262 (NWRL PAD7), Lot 2 DP 1107809 to the east, Balmoral Road to the



south, and Old Windsor Road to the West. The BRO salvage area was AHIMS #45-5-3554, but also incorporated AHIMS #45-5-4839 (NWLR PAD4); a potential archaeological deposit; corner of Taggart Way and Balmoral Road AHIMS #45-5-4195, an isolated stone artefact; and AHIMS # 45-5-3158 (WR-IF-1), an isolated stone artefact. All these sites are between 130 m to 300 m south of the current study area.

The excavation involved two phases and was focused on the lower and mid slopes of a spur with an easterly aspect overlooking Elizabeth Macarthur Creek. Phase one of the excavation included AHIMS #45-5-3354 and AHIMS #45-5-4195 over a 16 m<sup>2</sup> area. It resulted in the retrieval of 47 stone artefacts. Only two artefacts were recovered from AHIMS #45-5-4195 on the mid slope, and 45 artefacts were recovered from AHIMS #45-5-3354 on the lower slopes - with one square containing 40 artefacts. On the basis of these results, Phase 2 of the salvage excavation was centred around the square containing 40 artefacts, and an area of 80 m<sup>2</sup> was excavated resulting in 1,286 stone artefacts been recovered.

The artefacts were mainly made from silcrete, which comprised 94% of the assemblage, but other stone including grey silicified tuff (5%), chert, quartz, petrified wood and igneous material was also used. The red-yellow silcrete was of a normal colour range for the Caddies Creek catchment; however, the deeper red-purple colours characteristic of heat effected chemical changes were noted within objects near the burning events. The artefact types comprised 27 cores, along with tools/implements including recognised tool types and flakes that had evidence of being used, either through further modification or signs of use wear. These included 18 backed artefacts, 1 geometric artefacts, 24 flakes or flake fragments that had been retouched, and two that had signs of usewear.

The remaining 1,293 artefacts comprised of angular fragments (47%) and flake fragment (35%), with only 15% being whole flakes. It was proposed that the high number of angular fragments with no identifiable diagnostics was a result of heat shatter.

It was also noted that there was a high percentage of artefacts with cortex and it was proposed that this was because it was a primary reduction site that utilised locally acquired silcrete cobbles. Furthermore, the identification of two possible heat-treatment pits and a high percentage of heat shatter supports the interpretation that this was a primary production site.

Charcoal samples were taken from approximately 13 to 16 cm below the surface and resulted in a date of 4,385 +/- 38 BP.

In summary it was suggested that this site had a strong relationship with the other salvage site AHIMS #45-5-3354 (PAD NWRL 7). It was proposed that BRO1 was the first stage of the tool production and PAD NWRL 7, was the second stage. However, the available radiocarbon dates for both sites place the occupation of both BRO1 and PAD 7 around 1000 years apart. It was proposed that if the two salvage areas



are connected, they would represent a very long term production partnership for silcrete manufacture.

### 1.3.3 McCARDLE 2022

McCardle was engaged in September 2022 to undertake an Archaeological Desk Top Assessment, which included a pedestrian survey, for the proposed residential development at 40 Memorial Avenue, which is the current study area. McCardle considered the geology and hydrology of the area and proposed that the area would be low in natural resources with no reliable fresh water. The land disturbance was assessed as being highly impacted by previous historical land uses and natural processes such as bioturbation which would have affected the archaeological record.

McCardle also conducted a search of the Aboriginal Heritage Management Information Services register (AHIMS) that identified 27 known Aboriginal sites within the search area. McCardle noted that a duplicate site AHIMS #45-5-4841/ AHIMS #45-5-4262 (NWLR PAD7) ran “along the southern end of the project area” but is partially destroyed. The boundary extent of this PAD is included in an image in her report (see Figure 7 below) and is shaded as a pink area extending across the southern portion of 40 Memorial Avenue.

McCardle summarises what she considers to be the most relevant archaeological investigations in the surrounding areas and highlights that the highest numbers of sites are within 50m of a water course and the dominant site types are stone artefact scatters and isolated stone artefacts. The report also focuses heavily on the stream order model and she states that as her study area is close to a second order stream it will have relatively sparse artefact distribution and density, and may represent evidence of localised one-off behaviour.

A separate section of the McCardle report focuses on summarising the KNC 2015 excavation report for AHIMS #45-5-4262 (NWLR PAD 7), which extends into the current study area. McCardle’s overview includes an image of the KNC study area boundary and the extent of the NWLR PAD 7 boundaries. The image is also annotated and includes the KNC excavation area, which also borders the southwest corner of the 40 Memorial Avenue lot boundary. McCardle’s summary of this site does not discuss the relevance of the findings of nearly 3,000 stone artefacts, along with dates that show the site was used nearly 4,000 years ago with her archaeological assessment of 40 Memorial Avenue.

McCardle (2022:21) provides a prediction model for her study area that states the following:

*Based on the AHIMS search and the background environmental research as well as both the regional and local archaeological contexts, it is predicted that whilst a 2nd order creek is approximately 45 metres from the project area, it would not have provided reliable fresh water and associated resources to*



*allow for more than transitory activities such as hunting and gathering with camping by very small numbers of people only. Evidence of such past Aboriginal land uses are manifest in the archaeological record as a background scatter of disused artefacts.*

This statement is not consistent with the findings of KNC who proposed, based on the stone artefacts and manufacturing techniques used, that the area was a tool-production site. Furthermore, KNC highlighted that the geomorphology of the area close to the creek contributed to its remarkable preservation that could be reliably dated.

McCardle only discusses her assessment of the study area in connection with the KNC salvage excavation towards the end of the report, as follows:

*The project area, being located on an upper slope and at least 45 metres from a 2nd order creek, no archaeological sites were identified during the survey and 45-5-4841/45-5-4262 (NWRL PAD 7) does not extend into the project area. This is likely due to a number of factors including:*

- *Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;*
- *Landform of an upper slope is not suitable for camping;*
- *The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and*
- *Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.*

Again, this is not consistent with the KNC 2015 report that clearly shows the NWRL PAD 7 extends into 40 Memorial Avenue and there was a tool production site here.

McCardle concludes her report by stating the following:

*It is well established that proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of a water source. The project area is located approximately 45 metres from semi reliable fresh water supply (2nd order) and on an upper slope and as such may be considered unsuitable for camping but may have been utilised for transitory movement or hunting/gathering activities and as this area appears to remain relatively undisturbed, such evidence may be present in that area (between the creek bank and the development footprint).*

Reiterating what was stated above, the KNC salvage site is within 50 m of a water source and contained thousands of stone artefacts including tools and implements, along with the by-products of stone tool manufacture. It was assessed by KNC, based on compelling evidence, as a toolmaking centre that first started being used approximately 4,000 years ago. The site does extend into 40 Memorial Drive and was not included in the KNC salvage excavation as it was not within KNC's area of



investigation. Furthermore, KNC states on the AHIMS # 45-5-4262 site card that “the remaining portion of the site (outside NWRL impact area) is likely to have a similar archaeological deposit and would require an AHIP prior to any impact”.

Even though Elizabeth Macarthur Creek is considered a second order water course there is no evidence that this would not have provided an adequate supply of fresh water to fulfill the needs of the people who once occupied the area for short and/or long-term stays. The stream order informs the predictive model that is incorporated in assessments as a useful base. However, it is imperative that all the evidence, especially the results of previous archaeological investigations of the neighbouring area, be taken onto account when undertaking an archaeological assessment.

The only recommendation McCardle includes is that before works can proceed the persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance and, should any Aboriginal objects be uncovered during works, all work will cease in that location.



Figure 3: Extracted from McCardle Cultural Heritage’s archaeological report for 40 Memorial Ave. The shaded pink area is NWRL PAD 7 (AHIMS site #45-5-4262/45-5-4841).

### 1.3.4 APEX ARCHAEOLOGY 2022

Apex Archaeology were engaged to undertake an Aboriginal Cultural Heritage Assessment and test excavation for an area near the corner of Hodges Road and



Free Settlers Drive for a proposed bridge. The project was part of the 40 Memorial Avenue, Bella Vista proposed development but had not been included in the McCardle 2022 Aboriginal due diligence assessment discussed above. During the background research it was apparent that the registered site AHIMS #45-5-4262 (NWRL PAD 7) that is located near the southern lot boundary of 40 Memorial Avenue extends into the current study area. This site had been partially excavated in 2015 by KNC, and as discussed above, had identified thousands of artefacts. Furthermore, the AHIMS site card # 45-5-4262 stated that the 'remaining portion of the site is likely to have a similar archaeological deposit and would require an Aboriginal Heritage Impact Permit prior to any impact'.

As such it was recommend that the area near the junction of Hodges Road and Free Settlers Drive be investigated further. Given that the PAD also covers a portion of the southern section of 40 Memorial Avenue that is surrounded by significant Aboriginal sites, it was further recommended that this lot also be reassessed. The following recommendations were made:

- Further Aboriginal archaeological assessment in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010), including full consultation with the Aboriginal community in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (OEH 2010), should be undertaken. This may include archaeological test excavations in accordance with the Code of Practice to determine the nature and extent of any archaeological deposits present, and an Aboriginal Heritage Impact Permit (AHIP) application may be necessary following DA approval and prior to works commencing.
- The results of the assessment and potential archaeological test excavations will inform the requirement for an AHIP application to be made to Heritage NSW prior to the commencement of works. Should the results of the assessment identify that no further archaeological investigations or AHIP applications are necessary, works may proceed with caution.
- The proposed works must be contained to the area assessed during this archaeological assessment. If the proposed location is amended, further archaeological assessment may be necessary to determine if the proposed works will impact any Aboriginal objects or archaeological deposits.
- No invasive works should be undertaken within the areas of sensitivity within the study area until further Aboriginal archaeological assessment and investigations are completed.

### 1.3.5 SUMMARY

In summary there have been four comprehensive archaeological investigations undertaken to the east, south and west of the study area. These included two archaeological salvage excavations undertaken by KNC in 2015 that uncovered thousands of artefacts comprising complete tools and remnant flakes from the tool-making process. Furthermore, the carbon dates undertaken during the excavations






showed the area surrounding the southern portion of the current study area began to be used approximately 4,000 years ago.

Additionally, the Gracewood retirement village that is just east of the current study area includes several registered sites and has a portion of the development conserved as a 'Core Aboriginal Conservation Zone'. The management plan for this conservation zone was produced by archaeologist Dr Jo McDonald who assessed the area. McDonald has an enormous amount of expertise on site prediction within the Cumberland Plain and produced the management plan based on the stone artefacts that were identified within her study area, and the intactness of the landform that is expected to retain a significant amount of subsurface artefactual material.

These past archaeological investigations conducted by KNC and Jo McDonald, along with consideration of the natural environment that would have been present at the time of occupation, provide evidence that this area would have been rich in natural resources including plants and animals, and an important place for the Aboriginal people. The people who once resided here for short and/or long stays brought additional 'natural resources' in the form of stone material to the area to process them into tools and implements. These stone raw materials would have most probably have come from one of a number of known silcrete quarries within the Cumberland Plain, or from the cornucopia of stone material types found in cobble form along the banks of the Nepean River.



- Study Area
- Lot Boundaries
- Hydrology
- Test Pits with Artefacts
- High Density test pits
- NWRL PAD 7

 PO Box 236 NOOWRA NEW SOUTH WALES 2541	<p>0                      100                      200</p>  <p>Meters</p>	Projection: MGA Zone 56 (GDA 94) Base Map: NearMaps 2023 Image Date: 18/01/2023 Final - Version 1	Figure 4: Extent of identified archaeological sites within the study area.	
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## 2.0 MANAGEMENT STRATEGIES

This ACHMP has been prepared to provide strategies for the management of Aboriginal cultural heritage within the study area. In this case, this comprises a salvage excavation program for all identified archaeological sites within the study area. The salvage strategy for these sites is outlined in the following section.

### 2.1 STAGED SALVAGE STRATEGY

Apex Archaeology will undertake a staged salvage excavation in two parts whereby three test pits would be expanded to 9m<sup>2</sup> (Stage One), with a subsequent salvage or open area expansion (Stage Two) targeting high artefact concentration areas as identified during Stage One. It is proposed to expand three areas up to an additional maximum area of 75m<sup>2</sup> as part of Stage Two. The total area to be excavated in both stages would be a maximum of 102m<sup>2</sup>, comprising three initial pits each of 9m<sup>2</sup> (total 18m<sup>2</sup>) in Stage One, and a further additional 75m<sup>2</sup> in Stage Two. This would be a maximum amount, and would be dependent on the results of both stages. Excavation of both stages would be undertaken as outlined in Section 2.1.3.

The salvage excavation would focus on test pits excavated by Apex Archaeology, namely test pits 12, 13 and 19.

#### 2.1.1 RE-LOCATION/EXPANSION OF APEX ARCHAEOLOGY TEST PITS – STAGE ONE

- Three of the test pits originally excavated by Apex Archaeology within 40 Memorial Avenue, Bella Vista will be reidentified and re-excavated;
- The selected test pits comprise Apex Archaeology test pits 12, 13 and 19;
- Salvage pits will be oriented north – south using a handheld compass for accuracy;
- Eight 1m<sup>2</sup> salvage pits would be excavated around the central re-excavated test pits forming a 9m<sup>2</sup> open area;
- Artefact concentrations will be recorded on graph paper to keep track of directionality and to determine which areas to continue expanding in Stage 2.

#### 2.1.2 OPEN AREA SALVAGE – STAGE TWO

- Open area salvage will continue to an additional 25m<sup>2</sup> in three areas as determined by artefact concentrations from Stage One.

#### 2.1.3 EXCAVATION METHODOLOGY

- All pits will be 1m<sup>2</sup> and excavated in 5cm spits by hand using a shovel, hand shovel and trowel as appropriate. Spit depths will be consistently checked with a hand tape measure to ensure accuracy of excavation depth;
- If cultural features (e.g. hearths, heat treatment pits, knapping floors) are identified during excavation, excavation with hand tools (e.g. hand shovel and shovel) will cease and continue with trowel only;



- Locations of identified features will be planned onto 1mm graph paper. X, Y and Z coordinates of individual artefacts from in-situ knapping floors will be recorded and photographed prior to removal (where possible) and continuation of excavation;
- The presence of any one or combination of the following triggers will determine if further excavation will continue in any of the initial open area expansion sites (Stage One) and will be utilised during further expansion in Stage Two:
  - The relative density of artefact frequencies. If higher numbers of artefacts are identified in one or more parts of the initial excavation, they will be further explored;
  - Based on the results of the current test excavation, pits with more than eight items in any 1m<sup>2</sup> area would be expanded, up to the maximum areas outlined in Section 2.1.1 and 2.1.2;
  - Variations of raw materials that warrant further investigation;
  - Unusual artefact types are found, e.g. complete flakes, tools, cores, other types such as ground edged implements etc;
  - Evidence of artefact manufacture is found, e.g. conjoining artefacts, flaking debitage, micro-debitage, complete flakes, broken flakes; tool manufacture or maintenance;
  - Evidence of different activities, indicated by different artefact types e.g. backed artefacts, partly made backed artefacts and backing debitage, tool retouching debitage, debitage with dorsal grinding and retouched and/or used tools, different raw materials and raw materials with distinctive banding or inclusions;
  - Chronological material (any materials that can be used to date artefactual materials);
  - Taphonomic/site formation indicators; and
  - Any other relevant features appropriate for further investigations, e.g. archaeological features such as evidence of burning in a hearth, stone features; clay features etc.
- Charcoal samples for dating (C<sub>14</sub>) will only be taken during in-situ excavation of accurately identified cultural features (e.g. hearths and heat treatment pits);
- Any charcoal samples will be recovered and placed into aluminium foil, securely sealed, and placed into zip lock bags, clearly labelled and provenanced;
- The soil from each spit will be placed in 10L plastic buckets and transported to the sieving station;
- To ensure sufficient control of each spit excavated, a bag will be written to accompany the buckets from each spit. The following information will be recorded on each bag: site name, date, pit location (easting & northing) and name of excavator;



- All material from each salvage pit will be dry sieved through table sieves (1 x 1m) with a wire mesh aperture gauge of 5mm, with the option to include 3mm mesh depending on the soil matrix and micro debitage recovery.
- Wet sieving may be necessary depending on the soil matrix/weather conditions, and will be implemented if necessary;
- All material recovered from the sieving process will be checked by a qualified archaeologist with experience in artefact identification prior to being placed into the spit bag;
- Artefact counts will be recorded for each spit; and
- Lithic analysis on completion of the salvage excavation will be undertaken by Dr Beth White who is a specialist with suitable experience (30+ years).

## 2.2 RESEARCH QUESTIONS

The following research questions should guide the archaeological salvage excavations of the site.

- What do the salvage results indicate about the past Aboriginal occupation of the area and within the wider Cumberland Plain region?
- Can site formation processes be identified, and how do these formation processes impact the integrity of the archaeological deposits present?
- How do the salvage excavation results compare to other local and regional archaeological results and predictive models?
- Are the raw material sources consistent with those identified within the wider area? Are they different? Is there change over time? Can this be related to Aboriginal use of the area and does topography influence the results?
- Is it possible to determine the activities undertaken within the site based on the characteristics of the artefact assemblage?
- Can conjoining artefacts be identified within the deposit? What is the vertical and/or horizontal displacement of these artefacts?

## 2.3 RECORDING

- Each spit will be recorded on a standard spit sheet with the following information:
  - site name;
  - date;
  - excavator name;
  - spit number;
  - spit depth;
  - pit location (easting & northing);
  - start levels & end levels;
  - bucket count and end total bucket count;
  - soil description;
  - description of disturbance;
  - description of artefacts (material type & artefact type if *in situ*);



- in situ recording of artefacts where possible (xyz coordinates); and
- photograph details (from surface and of each spit to base).

## **2.4 ARTEFACTS AND CHAIN OF CUSTODY**

Any artefacts that are recovered from the salvage excavation will initially be stored at Apex Archaeology's office in a lockable cupboard. The artefacts will then be transferred to be analysed by Dr Beth White, who is an archaeologist experienced in artefact analysis and interpretation. During the analysis the artefacts will be temporarily stored at her office. On completion of the analysis the artefact assemblage will be transferred back to Apex Archaeology's office until reburial on site can occur. Once the artefacts are reburied the location will be recorded and provided to AHIMS.

The proposed location for reburial of the collected assemblage is shown on Figure 6 within green space and would not be subject to additional impact in future.

## **2.5 CESSATION OF EXCAVATION**

Excavations will cease upon reaching basal clay, bedrock or a culturally sterile layer, or at the discretion of the archaeologist. Additionally, excavations would cease upon excavation of an assemblage sufficient to answer the questions. The decision to cease based on sufficiency would be made in consultation with the lithic analyst for the project.

Excavation would also cease in the event evidence of contact archaeology is identified, and Heritage NSW would be contacted to determine the appropriate approach. The site is not considered likely to have potential for contact archaeology to be present.

## **2.6 BACKFILL AND SALVAGE EXCAVATION**

It is considered likely that civil works would start on completion of salvage excavations and as such, the civil contractor will deal with the open area pits as part of the site works.

## **2.7 POST-EXCAVATION ANALYSIS**

On completion of salvage works within the study area, any surface and subsurface, artefacts recovered would be analysed by Dr Beth White as outlined in Section 2.4. Further, a salvage report detailing the results of any surface collection and salvage excavations would be prepared and provided to all RAPs for the project, as well as to AHIMS for inclusion on the report database.

Aboriginal Site Impact Recording Forms (ASIRFs) would be prepared for the impacted sites, detailing the results of the surface and subsurface salvage works undertaken within the area.



On reburial of artefacts recovered during all archaeological activities within the site, a new site card would be submitted to AHIMS detailing the location of the reburied items.



- Study Area
- Lot Boundaries
- Hydrology
- Test Pits with Artifacts
- High Density test pits
- NWRL PAD 7

	<p>0                      100                      200</p> <p>Meters</p>	<p>Projection: MGA Zone 56 (GDA 94) Base Map: NearMaps 2023 Image Date: 18/01/2023 Final - Version 1</p>	<p>Figure 5: Test pits to be targeted for expansion (circled yellow).</p>	<p>N</p>
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Figure 6: Artefact reburial location within the study area (Red Star).



## 3.0 ROLES & RESPONSIBILITIES

### 3.1 UNEXPECTED FINDS PROTOCOLS

In the unlikely event that suspected human remains are identified during construction works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW and the RAPs for the project would be required.

#### 3.1.1 CONTACT DETAILS FOR UNEXPECTED FINDS

Department of Planning and Environment: 1300 361 967

Deerubbin Local Aboriginal Land Council: 02 4724 5600

Justin Coplin - Dharug Custodian Aboriginal Corporation – 0414 962 766

Castle Hill Police Station: 02 9680 5399

### 3.2 CONTRACTOR INDUCTION

All personnel working on site should be aware of their legal obligations under the *National Parks and Wildlife Act 1974* with regard to Aboriginal cultural heritage. It is an offence to harm an Aboriginal object without an approval in place. The site has been assessed as having no Aboriginal archaeological potential, but within the Cumberland Plain, isolated finds can be located in almost any context, including heavily disturbed landscapes; and their locations can be very difficult to predict. As such, people working on site should be aware of the types of items that constitute Aboriginal objects, and what to look for. The following are examples of Aboriginal objects that have been recovered from excavations on the Cumberland Plain, with some images of items recovered from the current study area itself.

All photographs by Dr Beth White, lithic expert, from various excavations undertaken by Apex Archaeology.



Plate 1: Silcrete core

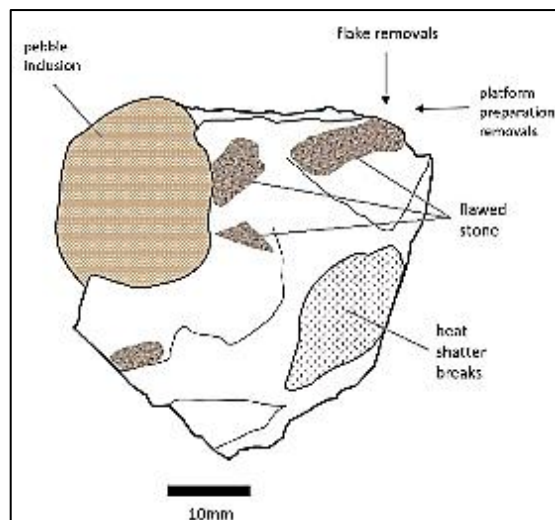


Figure 7: Silcrete core



Plate 2: Silcrete backed artefact

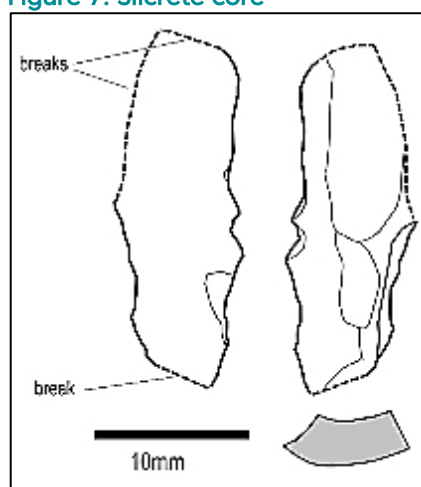


Figure 8: Silcrete backed artefact



Plate 3: Silcrete backed artefact

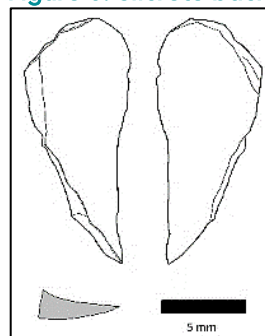


Figure 9: Silcrete backed artefact

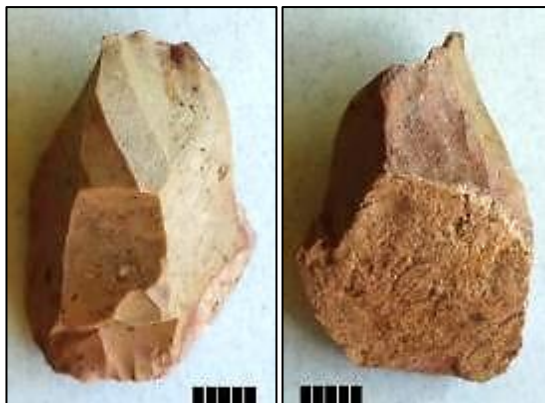


Plate 4: Silcrete core



Plate 5: Elongate IMST flake (recovered from current study area)



Plate 6: Fine Grained Siliceous broken flake

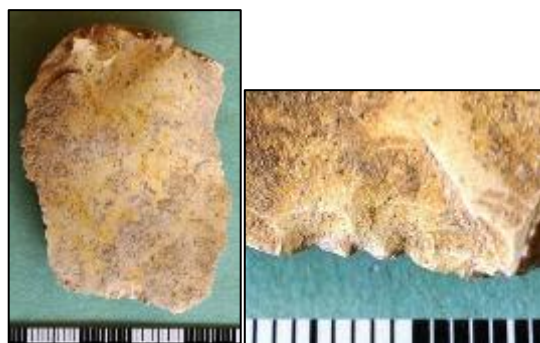


Plate 7: Indurated Mudstone Silicified Tuff serrate retouched flake



Plate 8: Broken Indurated Mudstone Silicified Tuff artefact with steep retouch along a straight edge



The above are just a few examples of the types of items that may be found within the Cumberland Plain. Plate 5 shows an artefact recovered from the current site. If there is any uncertainty over whether an item is culturally modified and of Aboriginal origin, an archaeologist experienced in lithic identification should be contacted to assess the find.

Penalties apply for impacting Aboriginal objects. Following the above in the event of an unexpected find mitigates the likelihood of prosecution.



### **3.3 ABORIGINAL CONSULTATION**

A copy of the ACHMP was provided to all RAPs for their review and comment on XX April 2025. Copies of the consultation documentation are attached to the ACHMP.

Any further consultation with the Aboriginal community would relate to any unexpected finds within the site during works.

### **3.4 REVIEW OF ACHMP**

This ACHMP should be subject to review at least every five years to ensure it meets the ongoing requirements of the memorial park; legislative requirements, and the requirements of the Aboriginal community. This review should also include review of any Aboriginal items collected since the previous review to remove any non-cultural items from the assemblage. A record of all confirmed cultural objects should be maintained.

The review of the ACHMP should be undertaken in consultation with the Aboriginal community who have registered an interest in being consulted (the registered Aboriginal Parties – RAPs).



## 4.0 REFERENCES

Apex Archaeology. 2022. *Aboriginal due diligence assessment, 40 Memorial Avenue, Bella Vista, NSW*. Report to Orion Consulting on behalf of Landen Property Group.

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## **ABORIGINAL COMMUNITY CONSULTATION FOR ACHMP**