



**PONDICHERRY RELEASE LAND REZONING  
SOUTH WEST PRIORITY GROWTH AREA**

**Aboriginal Heritage Assessment**

Prepared for Greenfields Development Company No. 2 Pty Ltd and  
Department of Planning, Industry and Environment

Camden Local Government Area

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## Document Information

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## Executive Summary

Greenfields Development Company No. 2 Pty Limited (GDC2) on behalf of the Department of Planning, Industry & Environment (DPIE) and in partnership with Camden Council, is undertaking a Planning Proposal / Development Control Plan (DCP) amendment process to rezone lands at Pondicherry. Pondicherry is an extension of the Oran Park Precinct in Sydney's South West Priority Growth Area (SWPGA, formerly the South West Growth Centre). Precinct Planning for the rezoning of the Pondicherry release lands has commenced.

The precinct planning process includes assessment of Aboriginal cultural heritage. Assessment for the project will be modelled on the *Appendix A – Protocol for Aboriginal stakeholder involvement in the assessment of Aboriginal Heritage in the Sydney Growth Centres* and *Appendix B - Precinct Assessment Method for Aboriginal Cultural Heritage in the Sydney Growth Centres* used in the former Sydney Growth Centres, as well as requirements of Heritage.

Investigations have identified five Aboriginal archaeological sites and two areas of potential archaeological deposit within the study area. Sites consisted of open context artefact sites and registered/previously identified locations of potential archaeological deposit (PAD). These results were consistent with predictions for the study area. Sites displayed scientific significance ranging from some (low) to moderate. With appropriate management and/or mitigation none of the identified Aboriginal heritage features should prevent development of Pondicherry.

Aboriginal objects are protected and regulated under Part 6 of the *National Parks and Wildlife Act 1974*. It is an offence to harm or desecrate an Aboriginal object or declared Aboriginal place without appropriate approval. An Aboriginal heritage impact permit (AHIP) under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object or declared Aboriginal place. All potentially impacted Aboriginal objects will require implementation of a process for appropriate management and/or mitigation.

Throughout the precinct planning process it was recommended the development of the Indicative Layout Plan (ILP) avoid harm to Aboriginal objects where possible. Assessment of the ILP in relation to Aboriginal heritage of the study area shows that most Aboriginal heritage will be impacted by development. Where harm to Aboriginal objects cannot be avoided, an AHIP would be required. Measures for mitigating harm to Aboriginal objects were recommended for sites or areas with higher archaeological or cultural values. An AHIP would be required for mitigation activities.

In summary, the Aboriginal heritage assessment of the study area has shown that:

- All sites containing Aboriginal objects will be harmed by future development of the study area according to the ILP.
- An Aboriginal heritage impact permit (AHIP) issued by the Heritage NSW under section 90(1) of the *National Parks and Wildlife Act 1974* is required prior to any activity which may harm an Aboriginal object.
- Mitigation measures (salvage excavation) are required to mitigate harm to Aboriginal objects and loss of value resulting from development of the study area. An AHIP is required for mitigation activities.
- Registered Aboriginal stakeholders have identified Pondicherry as a significant area and all sites have cultural value and are significant to the local Aboriginal community.
- The Government Architect NSW *Connecting with Country* draft framework is currently being tested through several government projects within a pilot program and is not specifically intended to be considered in relation to Aboriginal archaeological and cultural heritage assessments. However, the draft framework has been considered in this document and should be considered and utilised as a guide for future detailed design by architects, planners and designers within the Pondicherry precinct study area.
- Consultation with registered Aboriginal stakeholders for the study area is ongoing. Consultation with registered stakeholders should continue in relation to future development activities within the study area. Consultation for seeking an AHIP should be undertaken in accordance with the requirements of Clause 60 of the *National Parks and Wildlife Regulation 2009* and *Heritage NSW Aboriginal cultural heritage consultation requirements for proponents 2010*.

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# 1 Introduction

## 1.1 Project description

Greenfields Development Company No. 2 Pty Limited (GDC2) on behalf of the Department of Planning, Industry & Environment (DPIE) and in partnership with Camden Council, is undertaking a Planning Proposal / Development Control Plan (DCP) amendment process to rezone lands at Pondicherry as an extension of the Oran Park Precinct in Sydney's South West Priority Growth Area (SWPGA, formerly the South West Growth Centre). Precinct Planning for the rezoning of the Pondicherry release lands has commenced.

The Precinct Planning process aims to determine the future urban development potential of the lands and establish planning controls that will enable development consistent with this potential. Precinct planning involves detailed investigations into appropriate land use options, physical environmental constraints and infrastructure requirements. Environmental and urban form assessments are being undertaken to inform the rezoning of the land as well as potential future development layouts within Pondicherry.

The rezoning area, known as Pondicherry, is within the Camden Local Government Area (LGA). Pondicherry is located immediately north of the Oran Park Precinct, bounded on the west by the Northern Road and on the east by South Creek. It extends north to what would be the future Marylands Link Road that would ultimately connect to Leppington Major Centre. The land is owned by Leppington Pastoral Company Pty Limited, with development rights being granted to GDC2. The location of the proposed rezoning area is shown on Figure 1 and is hereafter referred to as the 'study area'.

The Precinct Planning process includes assessment of Aboriginal cultural heritage. GDC2 engaged Kelleher Nightingale Consulting Pty Ltd (KNC) to undertake an Aboriginal cultural heritage assessment and facilitate a consultation process with Aboriginal stakeholders for the Precinct Planning process. The assessment is based on the framework established by the former Sydney Growth Centres Commission, including the *Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres* and *Precinct Assessment Method for Aboriginal Cultural Heritage in the Sydney Growth Centres*. This assessment has also been prepared in accordance with the Heritage NSW requirements and guidelines relating to the assessment of Aboriginal heritage in NSW. These include:

*Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (OEH 2010a)

*Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011)

*Aboriginal cultural heritage consultation requirements for proponents 2010* (OEH 2010b)

The assessment of Aboriginal heritage as part of the Precinct Planning process represents an opportunity to consider Aboriginal cultural heritage sites, places and values in the early planning stages for the study area.

## 1.2 Study objectives

The objectives of precinct-based assessments are to:

- undertake background research and primary investigations, including historical, ethnohistorical, landscape/environmental, archaeological and cultural, to identify Aboriginal cultural heritage places and values within the precinct;
- involve Aboriginal stakeholders in all stages of Aboriginal heritage assessment and development of management recommendations;
- identify, assess, rank and map Aboriginal cultural heritage places and values within the precinct;
- report on significant Aboriginal heritage places and make recommendations as to how places with high known or potential heritage value should be conserved;
- work with other contractors in establishing an Indicative Layout Plan (ILP) or Indicative Structure Plan (ISP) which recognises significant sites or values;
- develop appropriate land use and management options for significant heritage places (including landscapes, sites, objects, historical places, etc.) based on their level of significance; and
- provide information to inform an application under Part 6 of the *National Parks and Wildlife Act 1974*.





Figure 1. Study area location

### 1.3 Assessment process

The Aboriginal heritage assessment process set out in the Sydney Growth Centre Guidelines aims to provide an integrated Aboriginal cultural heritage assessment, incorporating identified cultural, historical, landscape and archaeological values, to build an understanding of opportunities and constraints to future development and appropriate land use layout of the study area. The framework established by the former Sydney Growth Centres Commission is structured according to three key steps:

- Step 1 – Gather and analyse existing documentation
- Step 2 – Identify and assess Aboriginal cultural heritage values
- Step 3 – Develop land use and management options

Step 1 of the process involved gathering and analysing existing documentation and identification of gaps in the information for further investigation in Step 2.

Sources of known information regarding the study area and immediate surrounds have been identified during Step 1 of the assessment process. This included an understanding of the known archaeological context, ethnohistorical and historical context of the area. The results of background information gathering as well as gap analysis of existing information and some thoughts for further discussion and consideration were presented in a Step 1 report. Registered Aboriginal stakeholders for the precinct were each issued with the draft Step 1 report and invited to identify any additional known sources of information and information gaps to be assessed in Step 2.

Step 2 involved detailed site investigations, including site inspection and identification of Aboriginal sites across the study area. The results of detailed survey and mapping of identified Aboriginal heritage sites and places was presented in the Step 2 report. The results formed the basis for discussion on the significance of Aboriginal heritage sites and the study area as part of the significance ranking process. Significance rankings lead to preliminary recommendations in relation to Aboriginal cultural heritage values for the study area to be developed in Step 3 of the process.

The results of the survey, mapping and significance ranking of identified Aboriginal heritage sites within the study area, as identified in Steps 1 and 2 of the assessment process were presented in a draft Step 2 report. Registered Aboriginal stakeholders were invited to review and comment on the results, rank significance and provide input into potential development layouts for the study area and management recommendations for Aboriginal heritage.

Step 3 of the assessment process aimed to inform the rezoning of the land as well as potential future development layouts within Pondicherry in relation to Aboriginal cultural heritage sites and values identified in the study area. The findings of the assessment process are presented in this final report which will contribute to the development of the final land use options and resultant management recommendations.

A consultation process with Aboriginal stakeholders has been undertaken in accordance with the (former) DP&E protocols and Heritage NSW requirements including the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. Aboriginal heritage has been considered throughout the precinct planning process, helping to inform the rezoning of the land as well as potential future development layouts within Pondicherry.



## 2 Aboriginal Stakeholder Consultation and Participation

### 2.1 Stakeholder identification and consultation process

All steps of the assessment process were undertaken in consultation and with participation of registered Aboriginal stakeholders for the project. Consultation with Aboriginal stakeholders is essential for identifying the Aboriginal cultural heritage sites, values, constraints and opportunities for the study area.

The aim of consultation is to ensure all registered stakeholders have an opportunity to find out about the proposed future development of Pondicherry and provide input into the rezoning, precinct planning and management of Aboriginal heritage.

In accordance with the Sydney Growth Centre requirements, notice was made that precinct planning had commenced and Aboriginal heritage studies and consultation would be undertaken to inform the precinct planning process and future approvals required. The notice included acknowledgement that the groups and individuals specified in the protocol would be consulted and an invitation would be extended to other interested parties to register their interest in the consultation process regarding precinct planning and future development of the study area. In addition to discussions throughout the assessment, each step report was provided to stakeholders for review and input. A copy of the Consultation Log for the project is attached as Appendix C.

Following the initial notification and advertisement process for the Sydney Growth Centres outlined in the *Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres*, registered Aboriginal stakeholder groups and individuals for the South West Growth Centre included:

- Cubbitch Barta Native Title Claimants Aboriginal Corporation;
- Darug Aboriginal Cultural Heritage Assessments;
- Darug Custodian Aboriginal Corporation;
- Darug Tribal Aboriginal Corporation; and
- Tharawal Local Aboriginal Land Council.

The development of Pondicherry may be the subject of Aboriginal heritage impact permit (AHIP) applications made under section 90A of the *National Parks and Wildlife Act 1974*. To support future AHIP applications consultation has also been undertaken in accordance with the *Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (OEH 2010b).

In accordance with Heritage NSW requirements, this process is undertaken in four key stages:

1. Notification of project proposal and registration of interest;
2. Presentation of information about the proposed project;
3. Gathering information about the proposed project; and
4. Review of draft cultural heritage assessment report.

Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places at Pondicherry were invited to register interest in a consultation process regarding precinct planning in the study area. Stage 1 of the consultation process involved written notification of the project, advertisement and registration of interest. The closing date for registration of interest was 12 April 2017. A copy of the project specific advertisement is attached as Appendix A.

The notification and registration process for both the precinct planning and Heritage NSW consultation processes resulted in the following list of Aboriginal stakeholder groups listed in the table below:

**Table 1. Registered Aboriginal stakeholders\***

Registered Aboriginal Stakeholder	Name of Aboriginal Person and/or Contact person
Tharawal Local Aboriginal Land Council	CEO
Badu	Karia Bond
Biamanga	Seli Storer
Bidawal	Stella Brierley
Registered Aboriginal Stakeholder*	Details Withheld*
Cubbitch Barta Native Title Claimants Aboriginal Corporation	Glenda Chalker

Cullendulla	Corey Smith
Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham
Darug Custodian Aboriginal Corporation	Justine Coplin and Leanne Watson
Darug Land Observations	Anna O'Hara
Darug Tribal Aboriginal Corporation	John Reilly
Didge Ngunawal Clan	Paul Boyd
Djiringanj	Keith Nye
Elouera	Lenard Nye
Eora	Kahu Brennan
Goobah	Basil Smith
Gulaga	Wendy Smith
Gunjee Wong Cultural Heritage Aboriginal Corporation	Cherie Turrise (Carroll)
Kamilaroi – Yankuntjatjara Working Group	Phil Khan
Kuringgai	Toni Brierley
Meroo	Claudia Carriage
Minnamunnung	Aaron Michael Broad
Muragadi Heritage Indigenous Corporation	Vickylee Paddison
Murra Bidgee Mullangari Aboriginal Corporation Cultural Heritage	Darleen Johnson
Murramarang	Roxanne Smith
Murrin	Tarlarra Te Kowhai
Nerrigundah	Newton Carriage
Ngarigo	Newton Bond
Ngunawal	Mitchel Freeman
Nundagurri	Aaron Broad
Tharawal	Violet Carriage
Walbunja	Hika Tekowhai
Walgalu	Ronald Stewart
Yerramurra	Owen Carriage Jr

\*one Aboriginal stakeholder has registered for the project but has chosen to withhold their details in accordance with item 4.1.5 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Following registration of interest, identified stakeholders were contacted and information about the project assessment methodology was provided. The draft Step 1 report presenting the available background information and assessing knowledge gaps requiring attention was also prepared and sent to registered Aboriginal stakeholders. A 28 day review period was provided, with stakeholders invited to provide comment or suggestions.

The draft Step 2 report concerning the identification and assessment of Aboriginal heritage was prepared and sent to registered Aboriginal stakeholders for a 28-day review period. Stakeholders were invited to provide comments or suggestions. Cultural information and community feedback gathered as part of the Step 1 and Step 2 assessment is summarised below.

It has been identified during the consultation process that the local area and the study area have cultural heritage value to the local Aboriginal community.

Darug Custodian Aboriginal Corporation (DCAC) (letters dated 19 June 2017 & 28 September 2017) noted that:

This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site, there is a complex of significant sites.

Landscapes and landforms are significant to us for the information that they hold and the connection to Darug people. Aboriginal people (Darug) had a complex lifestyle that was based on respect and belonging to the land, all aspects of life and survival did not impact on the land but helped to care for and conserve land and the sustenance that the land provided. As Darug people moved through the land there were no impacts left, although there was evidence of movement and lifestyle, the people moved through areas with knowledge of their areas and followed signs that were left in the landscape. Darug people knew which areas were not to be entered and respected the areas that were sacred.

Knowledge of culture, lifestyle and lore have been part of Darug people's lives for thousands of years, this was passed down to the next generations and this started with birth and continued for a lifetime. Darug people spent a lifetime learning and as people grew older they passed through stages of knowledge, elders became elders with the learning of stages of knowledge not by their age, being an elder is part of the kinship system this was a very complicated system based on respect.

DCAC also indicated that they had reviewed the draft Step 1 report and draft Step 2 report and supported the recommendations set out in these reports.

Kamilaroi-Yankuntjatjara Working Group (KYWG) (letter dated 10 July 2017) expressed that the whole area in general was highly significant to Aboriginal people and that camping areas have been present in this area for over thousands of years. KYWG also expressed that there was potential for burial grounds in the local area. They expressed their happiness with the report and the importance of searching for Aboriginal heritage in the study area.

Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC) (letter dated 19 October 2017) provided specific comments on the draft Step 2 report. CBNTCAC is highly familiar with the study area and has been involved in all relevant previous Aboriginal heritage investigations. CBNTCAC noted that a number of sites listed in the AHIMS extensive search results table have since been excavated or destroyed under existing AHIPs for surrounding development areas, and that their inclusion in the table may suggest that they were still extant, when this was no longer the case. CBNTCAC also expressed that the destruction of these sites increased the significance of remaining sites due to their increasing rarity in the region. CBNTCAC also clarified that artefact scatters associated with the chief drainage lines were likely to extend into the areas currently covered by dams and that this should be taken into account when assessing archaeological potential, as artefacts have previously been recorded in these areas when water levels were lower (e.g. OPR-15 and OPR-15 North).

Responses were also received from several registered Aboriginal stakeholders including Darug Land Observations (DLO), Didge Ngunawal Clan (DNC), Gunjeewong Cultural Heritage Aboriginal Corporation (GCHAC), Gulaga, Murra Bidgee Mullangari Aboriginal Corporation (MBMAC) and Muragadi. In general, these stakeholders expressed their support of the draft Step 1 and draft Step 2 reports and the proposed methodologies for the Pondicherry project. There was also interest expressed in continued consultation and involvement in the project throughout the assessment process.

The draft Step 3 report concerning the development of land use and management options assessment of Aboriginal heritage was prepared and sent to registered Aboriginal stakeholders for a 28-day review period. Stakeholders were invited to provide comments or suggestions. Two responses were received from DCAC and CBNTCAC.

DCAC (letter dated 12 November 2019) expressed that Aboriginal archaeological sites exist as a complex and are not all separate sites. They recommended that the connections between sites be interpreted throughout the project. They also expressed the high importance of information gained from the sites and recommended community surface collection as well as salvage excavation. With exception of the large number of groups consulted on the project, they supported the draft Step 3 report.

CBNTCAC (letter dated 21 November 2019) reiterated concerns regarding the inundated archaeological site and conservation outcomes which did not avoid Aboriginal archaeological sites, suggesting that 'once these sites are gone, they are gone forever'. CBNTCAC stated that if an AHIP application is submitted for all seven sites, then they should all be subject to salvage mitigation and that some form of compensation to the Aboriginal community should be considered. CBNTCAC also stressed the importance of 'listening to those who have the right to speak for this Country, and the knowledge'.

Consultation to date has revealed the Pondicherry study area and surrounds are significant to the local Aboriginal community and incorporating these values into the ongoing stages of precinct planning will be important for the overall project.

Information obtained from the consultation process will inform the precinct planning process and may be used in the preparation of AHIP applications made under section 90A of the *National Parks and Wildlife Act 1974* for the study area. This will assist the Director General of Heritage NSW in his or her consideration and determination of the AHIP applications.

### 3 Landscape Context

#### 3.1 Environmental background

The Pondicherry study area is located on the south of the Cumberland Plain, a large low-lying and gently undulating landform in the Sydney Basin. The Sydney Basin is a large geological feature that stretches from Batemans Bay to Newcastle and west to Lithgow. The formation of the basin began between 300 to 250 million years ago when river deltas gradually replaced the ocean that had extended as far west as Lithgow (Pickett and Alder 1997). The oldest, Permian layers of the Sydney Basin consist of marine, alluvial and deltaic deposits that include shales and mudstone overlain by Coal Measures. By the Triassic period the basin consisted of a large coastal plain, with deposits from this period divided into three main groups, the Narrabeen Group, Hawkesbury Sandstone and the Wianamatta Group (Clark and Jones 1991, Pickett and Alder 1997).

The underlying geology of the study area consisted of Bringelly Shale, a late Triassic deposit of the Wianamatta Group (Figure 2). Bringelly Shale generally comprised shale, carbonaceous claystone, laminate and coal in parts. The coarsest sediment within the Bringelly Shale was an unnamed fine to medium-grained quartz lithic sandstone that occurred in discrete concentrations and was thought to be indicative of channel deposits (Bembrick et al 1991: 27). Deposits of more recent Quaternary alluvium are present within the eastern portion of the study area, deposited in association with flooding activity and channel development along South Creek and its drainage system which flows into the eastern and southern boundaries of the study area. Quaternary alluvial deposits consist of fine-grained sand, silt and clay.

The predominant raw material identified in retrieved archaeological assemblages in the area is silcrete (see Chapter 4). Silcrete naturally occurs in various quantities across the Cumberland Plain in the form of outcrops, large cobbles, river cobbles and flood borne deposits. In sum, viable archaeological quantities of silcrete can be found in most parts of the Cumberland Plain.

The basal geology is overlain by South Creek soils within the immediate vicinity of major creeks, transitioning to Blacktown soils on the adjacent elevated areas (Figure 2). The alluvial South Creek soil landscape is characterised by flat landforms with incised channels that are subject to frequent episodes of inundation, erosion and aggradation. The landscape contains deep structured loams and clays overlying bedrock or relict soils. The South Creek soil landscape may retain archaeological deposit but due to its location on active floodplains, integrity of deposit may be compromised due to repeated episodes of erosion and deposition caused by fluvial activity. Soils associated with the South Creek soil landscape are present in the floodplain visible along the south eastern boundary of the Pondicherry lands (Bannerman and Hazelton 1990).

Residual soils of the Blacktown soil landscape are present across the study area. The Blacktown soil landscape is typical on the gently undulating rises on shales of the Wianamatta Group. Blacktown soils consist of shallow to moderately deep hardsetting texture contrast soils. Red and brown podzolic soils occur on crests and grade to yellow podzolic soils on lower slopes and along drainage lines. Erosional susceptibility of this soil landscape is relatively low, but is increased where surface vegetation is not maintained. Blacktown soils have the ability to conserve archaeological deposits in situ but vertical stratigraphy may be lost. Archaeologically, this soil type is conducive to the survivability of archaeological objects where disturbance levels are low.

The western portion of the study area is delineated by broad crested ridges with moderate gradient overlooking a series of low terraces and floodplain associated with South Creek in the eastern part of the study area. Hydrology across the Pondicherry lands is characterised by South Creek and its tributaries. South Creek is one of the major watercourses of the Cumberland Plain. Online dams have been constructed across the study area and these have impacted the characteristics of the drainage system.

Land use within the study area is semi-rural in nature and has included grazing, dairying, market gardens and mixed pasture. Large areas have also been used for centre-pivot irrigated cropping. The study area has been cleared of the majority of original vegetation. Ground disturbance within the study area is generally minor to moderate and has been caused by vegetation clearance, agricultural activities, track construction and flood erosion along the waterways. Areas of more intensive disturbance exist within crop fields and in areas where excavation/construction has taken place for farm buildings.



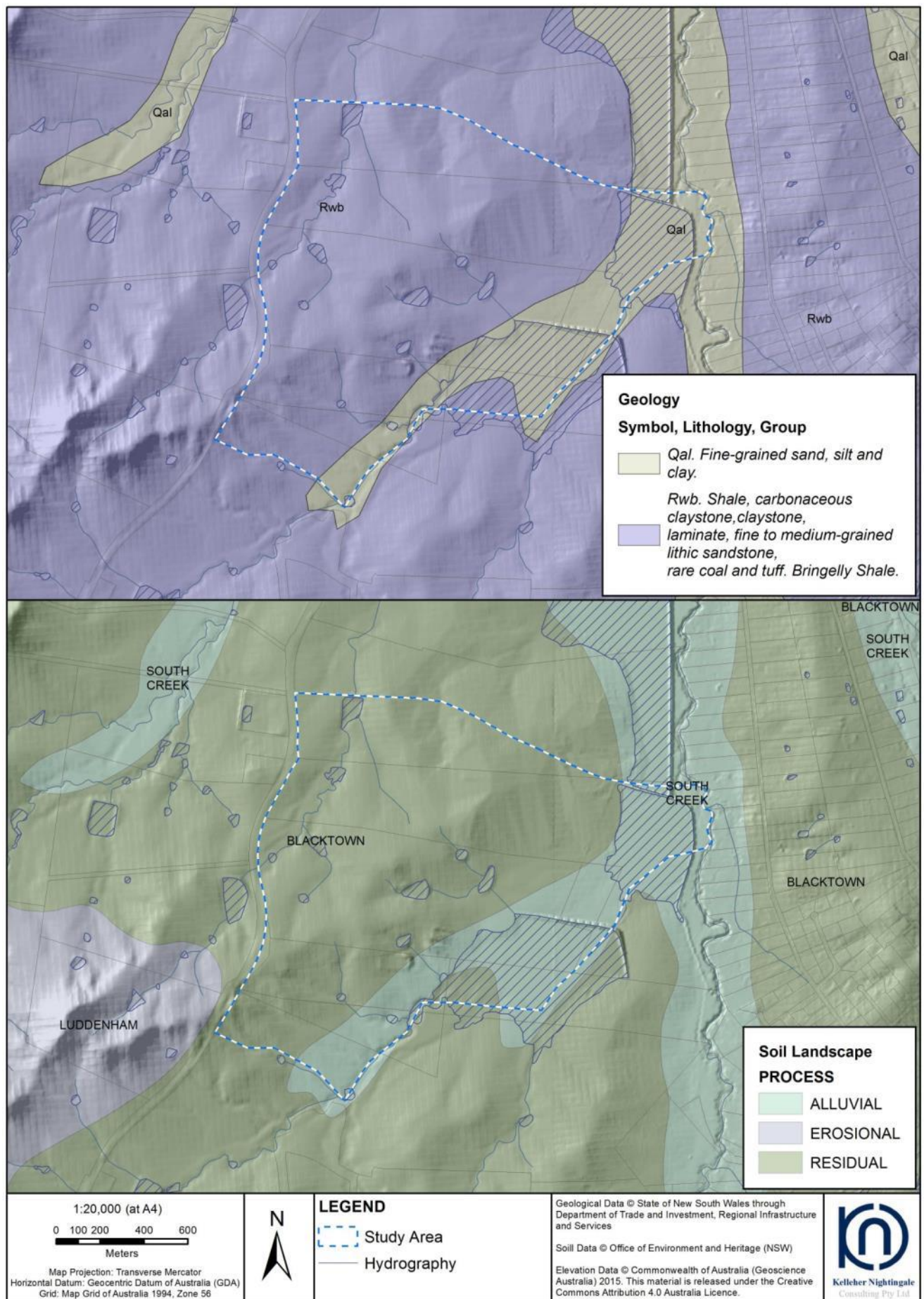


Figure 2. Geology and soil landscapes within the study area



### 3.2 Ethnohistorical and historical background

Although the specific study area is not recorded directly in any ethnographical accounts, it lies in a landscape which was important to and intensively used by Aboriginal people in the past (cf. Attenbrow 2002). Early observations made by British Officers described named groups of Aboriginal people associated with particular areas of land (Attenbrow 2002). It is likely these were small territorial clans and local clans of extended family groups, forming larger bands through social and cultural links including marriage and communal participation in subsistence activities.

Pondicherry lies within an area that may have been used by people from the Darug, Dharawal and Gundungurra language groups (Attenbrow 2002:34). The Darug language was divided between coastal and hinterland dialects and spread from Port Jackson west to the Cumberland Plain, the Gundungurra language was predominantly associated with the hinterland and spread from the southern Cumberland Plain across the southern Blue Mountains and the Dharawal language was largely associated with coastal groups and spread from Botany Bay south to the Shoalhaven River and west to the Georges River area, however the boundaries of “languages or dialects can only be indicative at best”, chiefly because groups of people and their language do not move around based on straight lines dividing language groups (Attenbrow 2002:34-35).

As well as differences in dialect, the British also observed differences in subsistence activities between different groups. Kohen (1986:77) explains that the Aboriginal people who lived between Parramatta and the Blue Mountains were not as dependant on fish and shellfish as groups closer to the coast, but relied on small animals and plant foods in addition to seasonally available freshwater mullet and eels. Berries, Banksia flowers and wild honey were also recorded as foods of the local inhabitants (Collins 1798). The major protein component of the diet on the Cumberland Plain was achieved through the hunting of small animals, a major economic contribution of the men. Along the rivers and larger creeks, bandicoots and wallabies were caught in traps and snares, while birds were snared using decoys. The open woodland of the Cumberland Plain would have played host to possums and gliders and these likely formed a major component of the diet. These were hunted in a number of ways, including smoking out the animal by lighting a fire in the base of a hollow tree, burning large tracts of land and gathering the stranded animals, as well as cutting toe-holds in trees and climbing up to reach them (Kohen 1993:10; Tench 1793:82).

The journal entries of George Caley, a botanist who was one of the first Europeans to visit the Cowpastures area, record Aboriginal hunting practices in the area. Caley conducted a series of surveys in 1804 and spent time with the Aboriginal people of the region. One group was familiar to him from previous visits and greeted him by name. This group, the ‘Cowpastures tribe’, was occupied with an activity known as ‘WalPonta’ at the time of Caley’s visit, hunting, using fire to flush out the kangaroos (JMCHM 2007b:24). Caley also noted the presence of a group of visiting Aboriginal men from the mountains accompanying the Cowpastures tribe on the hunt.

British interest in the area increased when it was found that a herd of cattle which had escaped from the fledgling colony had moved down to an area south of the Nepean. The seven year search and subsequent retrieval of the herd revealed the existence of the high quality grazing land in the area, which consequently became known as ‘The Cow Pastures’ (Liston 1988:5). Land grants followed soon after, the first of which was to Lieutenant John Macarthur, who received 5,000 acres bordering the Nepean River for the purposes of sheep breeding and wool export. The increasing settlement of the area by the British colonists led to conflict during the drought of 1814 – 1816, by which time many traditional Aboriginal resource-gathering areas had been engulfed by farmland and pasture. A spate of retaliatory killings between Aboriginal groups and settlers across Sydney eventuated in the dispatch of a punitive expedition to capture or kill those Aboriginal people involved in the skirmishes (Brook and Kohen 1991:23), after which the Dharawal people stayed in the Cowpastures area south of the Nepean River.

Not all interactions with settlers were hostile, however; friendly contact was maintained between the Dharawal and a number of land owners, most notably the Macarthurs, who documented corroborees taking place on their property and marked out a portion of land for Aboriginal people who wished to settle there under the family’s protection (Liston 1988:24). Corroborees and other sizable gatherings were also documented at other large properties and holdings in the area, including at the Denbigh property to the west and Denham Court to the north east. Up to 200 Aboriginal people were employed at a time on the Denbigh property during the early 1800s.

The direct connection between members of the contemporary Aboriginal community and the historical associations discussed above has been documented during the Aboriginal Heritage Assessment of neighbouring Precincts of the South West Priority Growth Area. Registered Aboriginal stakeholders for this project have previously expressed connection to the area.

## 4 Previous Archaeological Work

### 4.1 Database search (AHIMS)

The Aboriginal Heritage Information Management System (AHIMS) is a database operated by Heritage NSW, regulated under section 90Q of the *National Parks and Wildlife Act 1974*. AHIMS contains information and records related to registered Aboriginal archaeological sites (Aboriginal objects, as defined under the Act) and declared Aboriginal places (as defined under the Act) in NSW.

A search of the AHIMS register was conducted to identify any registered (known) Aboriginal sites or declared Aboriginal places within or adjacent to the study area (AHIMS Client Service ID 314035). Search results are attached as Appendix B. The AHIMS Web Service database search was conducted within the following coordinates (GDA, Zone 56):

Eastings: 289450E to 293715E  
 Northings: 6235284N to 6239101N  
 Buffer: 0m (search coordinates included an extensive buffer around the study area)

The AHIMS search results showed:

46	Aboriginal sites are recorded in or near the above location
0	Aboriginal places have been declared in or near the above location

The AHIMS search results and distribution of recorded sites are shown in Figure 3. The frequency of recorded site features is summarised in Table 2 below.

**Table 2. Site types and context from Heritage NSW AHIMS database search**

Site Context	Site Feature	Frequency	(%)
Open	Artefact	34	74
	Modified Tree (Carved or scarred)	2	4.3
	Artefact; Potential Archaeological Deposit (PAD)	8	17.4
	Potential Archaeological Deposit (PAD)	2	4.3
<b>Total</b>		<b>46</b>	<b>100</b>

Four previously registered Aboriginal archaeological sites are located within the study area; MSC 2 (45-5-4909), OPR-9 (45-5-3367), OPR-15 North (45-5-4950) and PAD 2038-6 (45-5-4035). These recordings are discussed further in section 4.4.

### 4.2 Other heritage registries and database searches

In addition to the search conducted on AHIMS, other sources of information including heritage registers and lists were searched for known Aboriginal heritage in the vicinity of the study area. These included:

- Camden Local Environmental Plan (LEP) 2010
- Sydney Water Heritage Register
- State Heritage Register
- State Heritage Inventory
- Commonwealth Heritage List
- National Heritage List
- Australian Heritage Places Inventory
- Historic Heritage Information Management System (HHIMS)
- Register of the National Estate (non-statutory list).

No items of Aboriginal heritage were listed as registered on these databases within the study area.



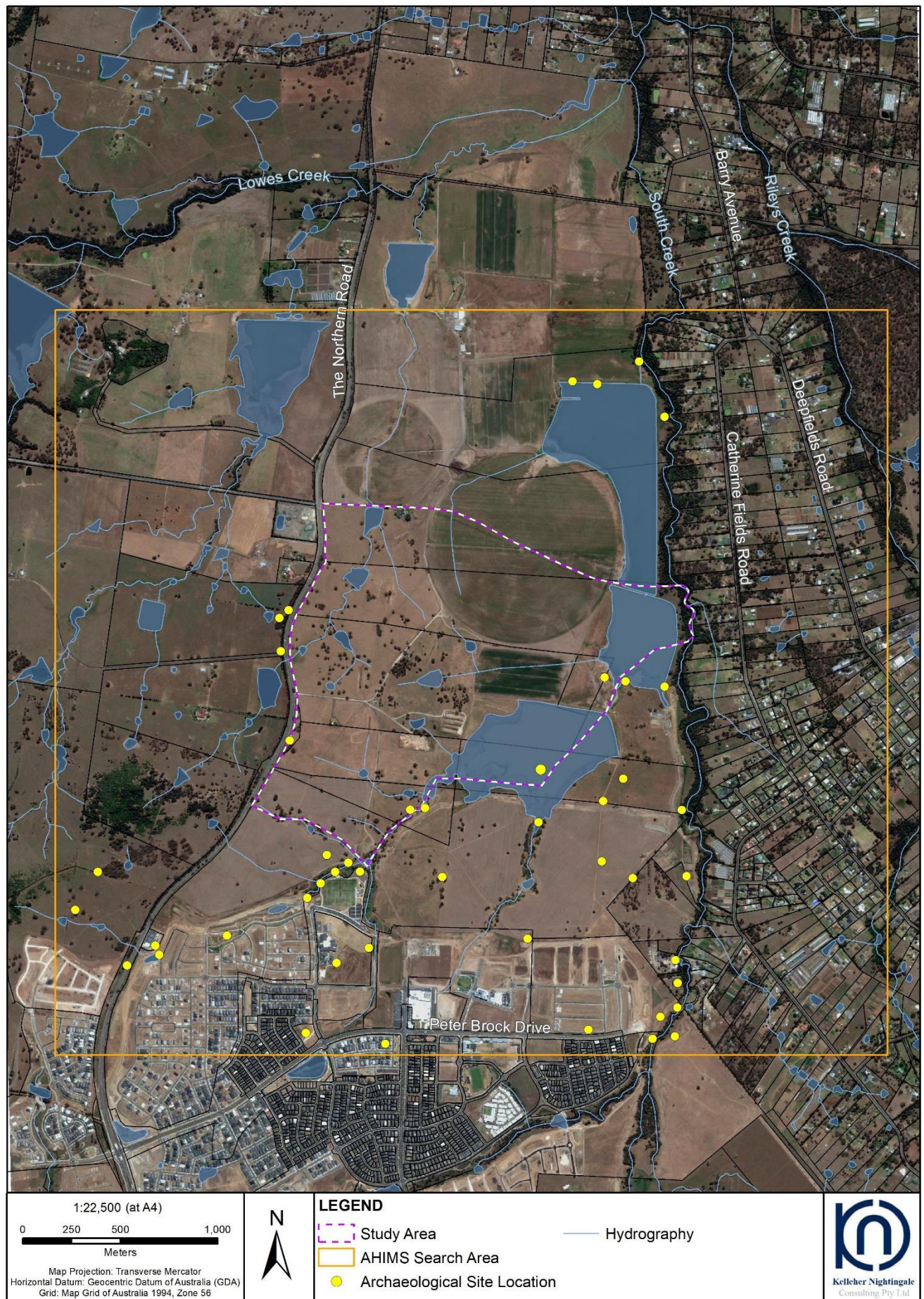


Figure 3. Previously recorded sites (AHIMS data)



### 4.3 Previous archaeological investigations

Database searches and review of known information sources have identified numerous archaeological sites in the vicinity of the study area. The majority of recorded sites in the AHIMS search area have been identified during archaeological assessments related to the ongoing planning and development associated with the neighbouring precincts of the South West Priority Growth Area, as well as associated infrastructure planning. The pertinent investigations and sites identified as a result of these archaeological investigations are summarised below.

Two of the first investigations in the area included excavation of sites bordering Narellan Creek, approximately four kilometres south of Pondicherry. Haglund (1989) excavated two sites bordering Narellan Creek (52-2-0912 and 52-2-0915), while English and Gay (1994) excavated site 52-2-1817, located on an elevated area overlooking the creek flats bordering Narellan Creek. Silcrete was the predominant raw material retrieved from both excavations, comprising 66% of Haglund's assemblage and 81% from site 52-2-1817. The raw material make-up of the remainder of the two assemblages consisted largely of indurated mudstone and quartz. The results of both excavations suggested occupation dates of between 5,000 and 3,000 years ago.

#### The Northern Road Upgrade

Artefact (2012) undertook archaeological investigations for the Northern Road Upgrade between the Old Northern Road, Narellan and Mersey Road, Bringelly. Assessment for the road upgrade was undertaken along the western boundary of the current study area. The assessment included archaeological survey of the proposed route. There were 24 Aboriginal sites recorded as being located within the assessment area. A further eight sites were considered within the assessment, as they were within a previous assessment area boundary or recorded during the survey, outside of the study area. In total, 32 sites were recorded as a result of the archaeological investigations for the survey. Site types consisted of 15 isolated finds, 14 artefact scatters, two scarred trees (one of which was later reassessed as not being an Aboriginal scarred tree) and one PAD. Artefacts included a backed blade, a scraper, cores, flakes/ broken flakes and flaked pieces. Raw materials consisted of silcrete, mudstone, grey chert, silicified tuff, quartzite and quartz. Ground visibility was very low, due to thick grass cover from high rainfall. Highly disturbed areas were associated with the road corridor, building construction and dams. Landforms assessed varied from gently undulating hills to creek flats. Several hilltops and ridgelines were also present within the survey area. Overall survey coverage was low, with an estimate of 2% of the study area having been effectively surveyed. Fifteen of these sites were to be directly impacted by the proposal, ten of which were assessed as having low archaeological significance and five of which was assessed as having moderate archaeological significance. A subsequent CHAR recommended that five Aboriginal sites be mitigated through archaeological salvage, one site through surface collection and eight destroyed under a Section 90 AHIP.

Previously registered site PAD 2038-6 (AHIMS 45-5-4035) was located within the Artefact study area and was reassessed as part of that study. PAD-2038-6 was originally recorded during investigations for water related infrastructure in 2010 and is located within the Pondicherry lands (current study area). The site was originally described as "a spur running northeast of the hill crest. Low disturbance and vantage over the watercourse indicate the possibility of intact sub-surface deposits. The road verge is highly disturbed on the eastern side of The Northern Road and excluded from the PAD area." Reassessment and archaeological survey by Artefact (2012) noted further ground disturbance as a result of ploughing, stock trampling and sheet wash in the PAD area. Artefact (2015:28-29) considered that the area did not display high potential for significant archaeological deposits. It was recommended that an Aboriginal Site Impact Recording Form (ASIRF) be prepared for the recording, stating that it was not a PAD and has low potential for buried archaeological deposits to remain. The PAD remains a registered site on the AHIMS database as of June 2017.

#### Catherine Fields (Part) Precinct

Aboriginal Heritage Assessment for the adjacent Catherine Fields (Part) Precinct was undertaken by KNC in 2012. The Catherine Fields (Part) Precinct assessment was located approximately two kilometres south of the study area. The parcel of land assessed extended to Oran Park Road, and adjoined the Oran Park Precinct to the north. Site predictions for the part precinct indicated that South Creek was a major landscape feature and likely focus of Aboriginal activity. Whilst archaeological deposit bordering the creek corridor was likely, low-lying flats bordering South Creek were flood-prone and thus would have adversely affected the presence and integrity of these deposits (KNC 2012a). Raised terraces and other relatively elevated portions of ground within the wider floodplain corridor offered the greatest probability of retaining intact archaeological deposit. Archaeological field survey resulted in the identification and relocation of a total of 16 Aboriginal sites and registered PADs. These sites included artefact scatters and isolated finds, primarily flakes and flake fragments made from silcrete, tuff and quartz materials.

Archaeological test excavation of the southern portion of South Catherine Fields, known as Catherine Park was undertaken in 2013 (KNC 2014). Four sites (CFPP-02, CFPP-07, CFPP-08 and CFPP-09) identified within the aforementioned survey were targeted to understand the nature and extent of the deposit. Three additional locations were also targeted, based on landform context and potential to inform on flood effected sediment profiles surrounding South Creek and the implications of this for the archaeological record.

Four additional sites were also identified in the additional areas selected for testing: CFPP-09A, CFPP-13, CFPP-14 and CFPP-15. Sites comprised artefact scatters and isolated finds. The most commonly encountered raw material was silcrete, followed by quartz, tuff and small frequencies of other raw materials. Artefact types were dominated by flakes and flake fragments. No formal tool types were identified. Test excavation results indicated an archaeological deposit of varying integrity within Catherine Park. Investigated areas within the flood zone bordering South Creek yielded very low artefact densities consistent with secondary alluvial deposition resulting from successive moderate to high energy flood events. More stable landforms elevated on the flood zone margins were generally found to contain higher densities of artefacts and offered further potential to inform on Aboriginal landscape use within the local area. Four sites were assessed as displaying moderate archaeological significance and seven sites displaying low archaeological significance. An appropriate mitigation program was been proposed within the AHIP application for impacts to those sites listed as displaying moderate significance. This included salvage of four of the 11 impacted sites within the AHIP area. Salvage excavations were subsequently undertaken by KNC in February and March 2015.

Archaeological test excavation of the northern portion of South Catherine Fields was undertaken in 2014 (KNC 2015a). Test excavation confirmed the presence of subsurface archaeological deposit at previously identified surface sites CFPP-03, CFPP-04, CFPP-05 and CFPP-06. Two additional sites were also identified in the additional areas selected for testing: CFPP-16 and CFPP-17. Sites were generally found to comprise low density archaeological deposits with occasional areas of higher density. The most commonly encountered raw material was silcrete, followed by tuff, quartz and chert. Artefact types were dominated by flakes and flake fragments. A single core was identified. Test excavation results indicated an archaeological deposit of varying integrity within Lot 7 DP 1173813. Investigated areas within the flood zone bordering South Creek and Kolombo Creek yielded very low artefact densities consistent with secondary alluvial deposition resulting from successive moderate to high energy flood events. More stable landforms elevated on the flood zone margins were generally found to contain higher densities of artefacts and offered further potential to inform on Aboriginal landscape use within the local area. Testing on the elevated crest and slopes demonstrated a general absence of archaeological deposit due to deflated soils and erosion. The archaeological significance of the nine identified sites was assessed, with three sites assessed as displaying moderate significance and six sites displaying low significance. An appropriate mitigation program was proposed for impacts to those sites listed as displaying moderate significance. Sites CFPP-03, CFPP-05 and CFPP-06 were recommended for salvage excavation. AHIP # C0001014 was granted by OEH in 2015 for impact to the development lands and the identified archaeological sites and included provision for a mitigatory salvage excavation program of sites demonstrating at least moderate significance.

#### **Oran Park and Turner Road Precincts**

Assessment of the Oran Park and Turner Road Precincts, from desktop assessment to field survey to archaeological excavation, has taken place over several years. The current study area borders the Oran Park Precinct and subsequent AHIP area. The Step 1 desktop assessment of the precinct was conducted by Jo McDonald Cultural Heritage Management and included an assessment of the Oran Park and Turner Road Precincts (JMCHM 2007a). The Turner Road precinct is located on the south side of Camden Valley Way. The Step 1 assessment aimed to review existing background information and identify knowledge gaps that could be addressed by subsequent field investigation. The initial assessment used aerial photographs, topographic maps and land use mapping to estimate areas of previous disturbance and remaining areas of archaeological potential within the precinct. The precincts were divided into four zones, with Zone 1 areas considered to show high potential to retain intact archaeological deposits through to Zone 4, areas considered to display low potential to retain intact archaeological deposits.

Stage 2 assessments of both precincts consisted of archaeological field survey to ground truth the generalised conclusions about archaeological potential drawn during Stage 1. Step 2 assessment included an archaeological field survey which resulted in the identification of 38 previously unrecorded archaeological sites and four areas of Potential Archaeological Deposit (PAD) within the Oran Park Precinct (JMCHM 2007b). Identified sites consisted of open artefact scatters, scarred trees and isolated finds, with PAD areas defined based on landscape parameters including landform, proximity to hydrological features, the nature and extent of surrounding sites and low levels of disturbance. Survey of the Turner Road Precinct identified 14 sites and four additional areas of PAD (JMCHM 2007c). The sites identified during this field survey consisted of artefact scatters and isolated finds. Following the Step 2 assessment, two phases of archaeological excavation were undertaken. Phase 1 test excavations were undertaken by HLA ENSR (2008) in order to characterise the archaeological deposit present within three proposed conservation areas along the riparian corridors in Oran Park. The aim was to test the portion of the area outside the conservation zone, in order to identify the archaeological content and Aboriginal cultural heritage values of the conservation zones. At Turner Road Precinct, a single test location was identified on the same premise. The proposed conservation areas were selected from within the 'Zone 1' landscapes identified during Step 1 and 2 assessments. Test excavation was conducted along the border of the conservation areas, along a single 25m by one metre trench a short distance outside of each boundary. The results of the Stage 1 test excavations demonstrated an artefact assemblage comprised primarily of silcrete, with smaller proportions of other raw materials typical of Cumberland Plain assemblages. Artefacts included geometric and Bondi point forms of backed artefacts, an abrupt retouched point, thumbnail scrapers and non-specific retouched flake "scrapers" (ENSR AECOM 2008:4). Mitigation included Phase 2 excavations which were subsequently conducted by ENSR AECOM (2009), which sought to test a representative sample of each landform within the Oran Park and Turner Road Precincts.



In total, Phase 2 excavations at both Precincts comprised 340 test pits (totalling 340 m<sup>2</sup>) and 160 m<sup>2</sup> of salvage excavation. A total of 4,040 artefacts were recovered, giving a total of 4784 artefacts from Phases 1 and 2 combined. Silcrete, silicified tuff and quartz were the dominant raw materials, with low percentages of quartzite, chert, petrified wood, fine grained siliceous and igneous material. Over 75 % of artefacts were less than 30 mm, with backed artefacts (points) and cores being above 30 mm. In terms of distribution of archaeological material across the Precincts, ENSR AECOM (2009:64-65) emphasised the importance of elevated areas with good outlook located within 300m of third order creeks and 120m of second order creeks. AHIP 1100632 was subsequently issued by OEH in 2009 to Landcom and Greenfields Development Pty Ltd (GDC) for the development of Oran Park East (east of the Northern Road). The AHIP was granted with provision for three heritage conservation areas (OP-1, OP-2 and OP-3) and six site areas (OPR-9, OPR-11, OPR-17, OPR-18, OPR19 and OPR-23) to be maintained within the Oran Park East lands.

#### **Oran Park and South Catherine Fields Wastewater Servicing**

Aboriginal archaeological assessment has also taken place within Oran Park and South Catherine Fields by KNC (2015b; 2015c). The archaeological investigations were located along South Creek, approximately one kilometre to the southeast of the study area. A due diligence assessment identified a total of 12 Aboriginal archaeological sites and one conservation area within the area; the majority of these sites had been previously identified within the Precinct assessments. However two newly identified sites MSC 1 and MSC 2 were recorded during the visual inspection (KNC 2015b). MSC 1 was an area of archaeological potential. MSC 2 was an artefact scatter and an area of archaeological potential. Both MSC 1 and MSC 2 are located within the current Pondicherry study area. The due diligence assessment determined that the majority of the proposal was located in lands which had previously been assessed for their Aboriginal cultural heritage values and were covered under existing Aboriginal Heritage Impact Permits (AHIPs) or identified sites which should be avoided. Consultation between Sydney Water and the AHIP holders indicated that the proposed works could be completed under these AHIPs, provided that work was undertaken in accordance with the AHIP conditions. The remainder of the proposal (comprising a portion of a proposed wastewater carrier main and pressure main) was located outside of existing AHIP areas and required further assessment.

The resulting CHAR for the wastewater servicing project identified three Aboriginal archaeological sites within the assessment area (KNC 2015c). Artefact Scatter PAD 2051-46 (AHIMS 45-5-4047) was a highly disturbed open artefact scatter and Potential Archaeological Deposit (PAD) associated with a market garden, affected by flooding and was found to display low archaeological significance. Artefact Scatter PAD 2052-46 (AHIMS 45-5-4048) was also found to be highly disturbed, comprising an artefact scatter and PAD associated with a storage yard and disturbed by earthworks and dumping of fill materials. The site displayed low archaeological significance. Artefact Scatter PAD 2053-46 (AHIMS 52-2-3848) was located on a series of small terraces associated with South Creek. Large portions of the site were inside the 1:20 year flood level and displayed disturbances associated with fluvial activity. The western portion of the site was marginally higher and forms part of an elevated terrace shelf above a defined drainage channel. Overall, the site was found to display moderate archaeological significance. All three sites were assessed as being partially impacted by the proposal and subsequently required an AHIP. Recommendations included management measures for non-impacted portions of the sites and archaeological salvage excavation for Artefact Scatter PAD 2053-46.

#### **Harrington Park**

An extensive, multi-phase, Aboriginal archaeological investigation has been conducted across three large properties approximately four kilometres south of the current study area. These properties were then referred to as Harrington Park, Orielson and Mater Dei. A number of sites, including artefact scatters, isolated artefacts and scarred trees have been recorded across these properties (Central West Archaeological and Heritage Services 2004, AMBS 2006). The findings were consistent with predictive models of site types and locations for the area and that it was representative of reduced Aboriginal activity away from major watercourses, such as the Nepean River. As plans for residential development progressed for these properties, archaeological excavations have been conducted at three Aboriginal sites.

One salvage excavation was conducted at site 52-2-3382 (KNC 2009a). Excavation conducted at site 52-2-3382 (KNC 2009a), was relatively close to those conducted by Haglund (1989) and English and Gay (1994) and in a similar landform setting. Site 52-2-3382 was located on a small, well-defined, elevated area overlooking Campbell Rivulet – a tributary of Narellan Creek. Similar to the assemblages recovered by Haglund (1989) and English and Gay (1994), silcrete (70%) comprised the majority of the artefactual material retrieved from site 52-2-3382. However, the make-up of the remainder of the assemblage differed markedly, with quartz comprising 26% of the assemblage and the remaining 4% made-up of a several different raw material types. Analysis of the retrieved assemblage suggested the archaeological deposit at site 52-2-3382 represented small, single knapping events dating within the last 5,000 years. Preliminary results from site 55-2-3328 indicated the presence of a large knapping floor located on a small elevation overlooking Cobbitty Creek – a 2<sup>nd</sup> order waterway. Raw material retrieved from excavation at the site included chert, tuff and red silcrete. Preliminary results from site 52-2-3329 indicated lower density (compared to 52-2-3328) silcrete knapping events. Site 52-2-3329 was located on a broad, gently sloping landform bordering a 2<sup>nd</sup> order tributary of Cobbitty Creek.

## Implications for the study area

The current study area is located in a similar environmental context to sites investigated during assessments of neighbouring SWGC precincts. The implications of these studies are related to the study area's position in the landscape to South Creek and its tributaries. Past Aboriginal occupation within the Cumberland Plain was affected by proximity to creeks and statistically more activity will have taken place near creeks. Flooding however, involves high energy and moves significant amounts of soil within the primary zone. While substantial artefact numbers may exist near creeks, in many cases the remaining objects are redeposited and represent low archaeological value. Previous investigations have indicated that micro-topographic relief and sediment stability generally correlate with the highest artefact frequencies and the most intact archaeological deposit. Previous archaeological investigations indicate that the archaeological resource of the study area may be able to offer an insight into the upper reaches of the South Creek valley's Aboriginal past.

## 4.4 Identified sites within Pondicherry

Four Aboriginal sites/PADs are known to exist within the study area. Three of these have been previously registered on AHIMS; one additional unregistered PAD was identified during the Oran Park and South Catherine Fields Wastewater Servicing assessment (KNC 2015b). Previously identified sites within Pondicherry include two artefact scatters and two PADs.

### *MSC 1*

Site MSC 1 was an area of potential archaeological deposit (PAD) that was previously identified during a field inspection north of an irrigation dam within the north eastern corner of the study area. While most of the area is within the 1:20 year flood zone, small micro-topographic rises have the potential to contain at least marginally intact archaeological deposit.

### *MSC 2 (45-5-4909)*

Site MSC 2 was a large artefact scatter located on the former banks of Anthony Creek which is now partially submerged by a large basin. The site is located along the eastern boundary of the study area between two large irrigation dams. The highly dispersed spread of artefact suggests that the ground has suffered from a 'washout' where water action has eroded the topsoil and left the occasional artefact on the deflated surface. In most instances no A horizon soil units remained below surface artefacts, with clays exposed in several sections. While a large amount of surface objects exist (over 50 recorded), the site exhibits low archaeological potential for intact deposit.

### *OPR-9 (45-5-3367)*

Site OPR-9 was an artefact scatter located on the banks of a tributary running north to south. The site is located along the southern boundary of the study area, north of the junction of two first order tributaries and approximately 80 metres south east of a dam. The artefact scatter was comprised of flakes, flake fragments and a core. Raw materials consisted of red and purple silcrete, cream and grey tuff and quartz. OPR-9 was excluded from impact by AHIP #1100632 for the existing Oran Park precinct. AHIP # 1100632 lists artefact scatter OPR-9 as a protected site although the site is outside of the AHIP boundaries. It is unclear based on current information if OPR-9 has long term protection.

### *OPR-15 North (45-5-4950)*

Site OPR-15 North was a large high density artefact scatter initially recorded along the bank of Anthony Creek and existing drainage channels surrounding the large dam (which was significantly less full at that time). OPR-15 North was the northern extension of previously recorded site OPR-15 within the Oran Park Precinct. When originally recorded, the artefact scatter contained 193 recorded artefacts consisting of flakes, cores, backed artefacts and a petrified wood fragment. The site was considered to be in good condition overall. The portion of the site associated with OPR-15 has since been inundated and is below the surface of the large irrigation dam.

### *PAD 2038-6 (45-5-4035)*

Site PAD 2038-6 was a PAD situated on a spur running northeast of the hillcrest and is located on the western boundary of the study area, adjacent to The Northern Road. Low disturbance and vantage over the watercourse indicated the possibility of intact sub-surface deposits. The road verge was highly disturbed on the eastern side of the Northern Road and excluded from the PAD area. Reassessment and archaeological survey by Artefact (2012) noted further ground disturbance as a result of ploughing, stock trampling and sheet wash in the PAD area. Artefact (2012:28-29) considered that the area did not display high potential for significant archaeological deposits. It was recommended that an Aboriginal Site Impact Recording Form (ASIRF) be prepared for the recording, stating that it was not a PAD and has low potential for buried archaeological deposits to remain. The PAD remains a registered site on the AHIMS database as of November 2017.

## 5 Known Aboriginal cultural heritage in Pondicherry

Step 1 background information gathering and gap analysis for the study area resulted in the identification of five known Aboriginal sites within Pondicherry. Sites consist of open artefact scatters and areas of potential archaeological deposit (PAD). Site locations are shown on Figure 4 and summarised in Table 3.

**Table 3. Sites previously identified in the Pondicherry study area**

Site Name	AHIMS	GDA	Landform	Site Type	Site Summary
MSC 1	N/A	292601E 6237624N	Terrace	PAD	An area of archaeological potential located adjacent to the northern irrigation dam within the study area.
MSC 2	45-5-4909	292264E 6237219N	Creek Flats	Artefact scatter	Open artefact scatter located on exposed former bank of Anthony Creek, which is now a partially submerged basin.
OPR-9	45-5-3367	291163E 6236351N	Low order creek bank	Artefact scatter	Low density artefact scatter located on banks of Anthony Creek.
OPR-15 North	45-5-4950	291937E 6236747	Creek Flats	Artefact scatter	Open artefact scatter located on a modified creek line, which is now a submerged irrigation dam.
PAD 2038-6	45-5-4035	290650E 6236896N	Crest	PAD	Area of archaeological potential situated on a spur running northeast of the hillcrest located on the western boundary of the study area, adjacent to The Northern Road.



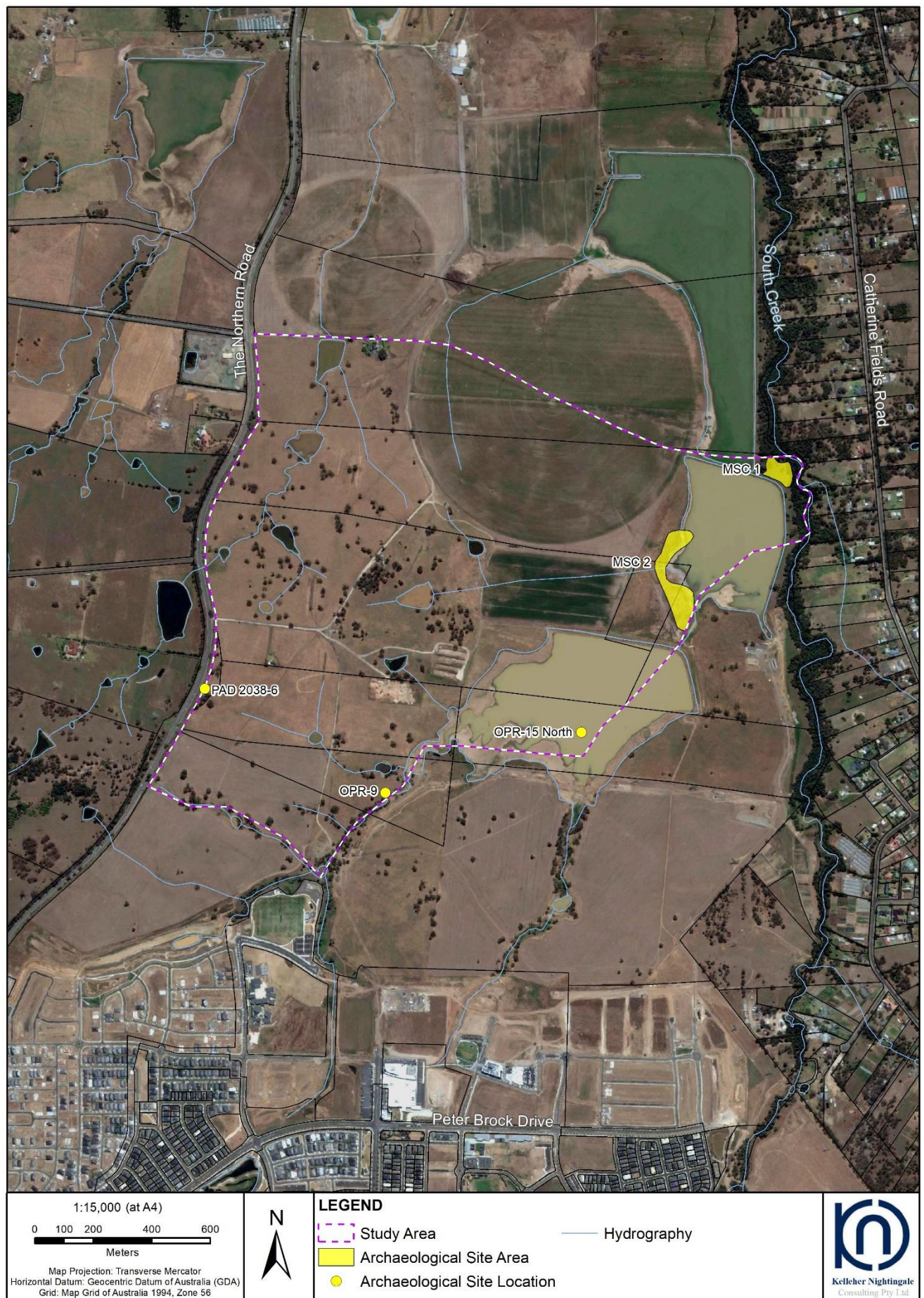


Figure 4. Identified sites within the study area



## 6 Regional Character and Site Predictions

Previous archaeological investigations, ethnohistorical and historical background, and an analysis of the landscape context of the area all provide data that assists in formulating predictions of expected site types and distribution within Pondicherry. Investigations undertaken within proximity to the study area indicate that the distribution of archaeological material in the area around Pondicherry focusses on a combination of suitable geology, flooding effects, landform and land use practices and disturbance.

Archaeological sites in the region generally occur as open camp sites or surface scatters and as isolated finds on the underlying Bringelly shale and Quaternary alluvium geologies. In the Plain proper, relatively elevated landforms along the margins of creeks, especially those offering permanent water and associated environmental resources would have been favourable for occupation by Aboriginal people. Previous studies undertaken in neighbouring precinct developments have found that higher density artefact scatters tend to occur within proximity to South Creek and its tributaries. Objects identified within the immediate vicinity of South Creek however, often represent low archaeological value as they have been redeposited as a result of high energy flooding events.

The topography within the survey area is dominated by South Creek, which forms the eastern boundary. South Creek is bordered on the west by gently to moderately sloping landforms grading up towards The Northern Road along the western boundary of the study area. Relatively elevated portions of ground and micro-topographic relief within proximity to South Creek and its tributaries will offer the best protection/probability for retaining high artefact frequencies with intact archaeological deposits. Elevated locations such as the series of spurs in the western portion of the study area tend to display a different archaeological signature, chiefly a sparser artefact distribution and less evidence for 'everyday' or utilitarian activities.

Numerous raw material sources have been documented in the wider region and are known to have been utilised by Aboriginal people in the past. The prevalence of silcrete, chert, quartz and tuff in regional artefact assemblages is related to the availability of these raw materials in regional geologies and their wide distribution across the Cumberland Plain. Silcrete in particular dominates regional artefact assemblages and there is evidence for intensive silcrete reduction activities taking place at both St Marys and at Plumpton Ridge, as well as widespread opportunistic use of silcrete outcroppings and cobbles across the broader landscape.

Preservation of archaeological sites in open contexts is difficult because of the adverse effects of erosion, floods and disturbance from various human activities. Historical and current land use practices within the study area have generally been agricultural. Previous studies have underscored the relationship between particular landforms and ground disturbance as key factors in the location of archaeological sites.

Based on the previous archaeological investigations, ethnohistorical and historical background and an analysis of the landscape context, site predictions for the study area include the following:

- Archaeological sites are likely to consist of open artefact scatters and/or isolated finds on the undulating plains associated with the Bringelly Shale/Quaternary Alluvium landscape.
- Elevated landforms with potential for intact archaeological deposit are likely to be located adjacent to South Creek and its tributaries.
- It can be expected that silcrete will be the most commonly encountered artefact raw material, with occasional occurrences of quartz, chert and siliceous tuff/mudstone.
- Clearance of the majority of original vegetation lessens the likelihood of identifying culturally modified trees, but old growth trees may be present along the watercourse and have the potential to display scars of Aboriginal origin.
- Archaeological sites are more likely to be identified in areas that have been subject to less intensive disturbance; conversely, areas of higher disturbance may have increased ground surface visibility which aids in the identification of Aboriginal objects.
- The identification of archaeological sites is likely to be affected by differential visibility of the ground surface, but successful assessment of areas of potential archaeological deposit can be made based on landform and other environmental factors.



## 7 Field Methods

Field survey was carried out in May and June 2017. The study area was divided into three Survey Units based on established property boundaries and landform elements (Figure 5).

Survey Unit 1 was located in the eastern portion of the study area and comprised slope, flat and open drainage depressions landforms draining towards South Creek. Micro-topographic terrace landforms were also present within the lower hillslopes along the north east study area boundary which borders South Creek. Survey Unit 1 also contained two large irrigation dams and a centre pivot irrigation field along the northern boundary. Creek flats associated with South Creek and Anthony Creek were also included within this survey unit.

Survey Unit 2 occupied paddocks located along the entire western boundary of the study area adjacent to The Northern Road. Landforms included within this survey unit included crests, slopes and drainage depressions associated with a ridgeline to the west of The Northern Road. An open drainage depression was located within this survey unit and contained a series of online dams. A small portion of the flat landform is present along the northern boundary, adjacent to a drainage depression. One private residence was also located within Survey Unit 2.

Survey Unit 3 occupied the remaining paddocks located in the northern and central portions of the study area. Two private residences were present in this survey unit. Landforms within the survey unit consist of crests, slopes, drainage depressions and flats. This unit included also included two dams.

Based on the archaeological background and landform context of the study area, the survey team closely inspected any areas of surface exposure for artefacts. Mature trees were also inspected for any evidence of Aboriginal bark removal. Assessments of soil disturbance were also made during survey. Detailed notes on the condition of the surveyed areas were compiled by the survey team. These included an assessment of surface visibility, vegetation coverage, modern disturbance and current land use.

The survey team was equipped with high resolution aerial photography showing the boundaries of the study area and the location of previously recorded sites. An additional aim of the field survey was to relocate and confirm (where possible) the location and extent of previously recorded sites listed on the AHIMS database. Where sites were relocated, a new GPS recording was taken and observations on site condition and the accuracy of AHIMS data were made. New site recordings were also completed for newly identified sites. Location data, site descriptions, relation to other known sites and field sketches were recorded and photographs taken. A non-differential GPS receiver was used for spatial recordings. All GPS recordings were made using the Geocentric Datum of Australia (GDA) coordinate system.

Results of the field survey are described in section 9 and shown on Figure 6. An assessment of survey coverage is presented and discussed in section 8 below.

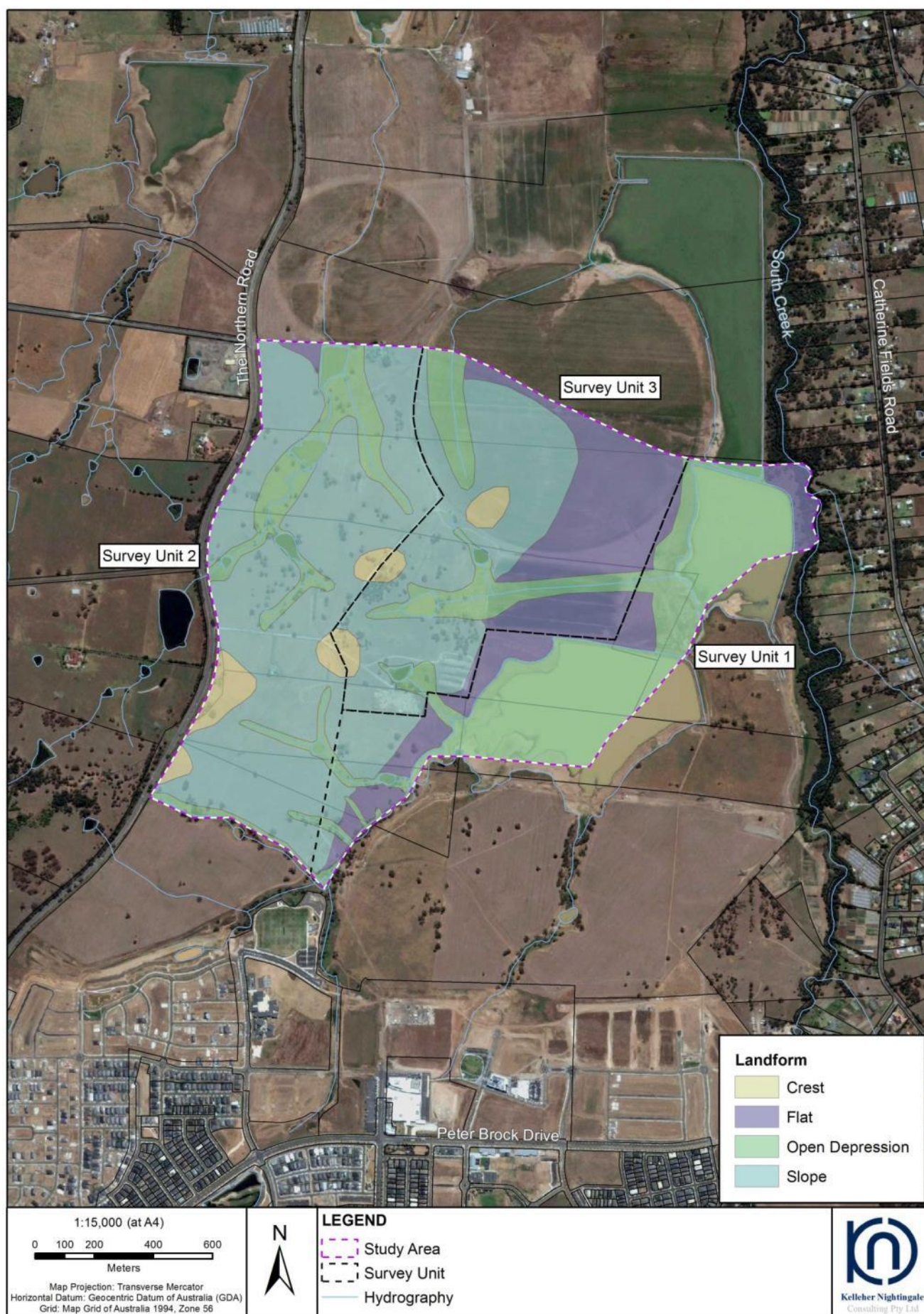


Figure 5. Survey units and landform



## 8 Survey Coverage

Terrain across the study area was characterised by gentle to moderate gradient slopes. Broad crests in the west overlook narrow floodplains associated with tributaries of South Creek to the east. The majority of the study area had been modified by agricultural land use practices. Cattle movement in particular has resulted in disturbance surrounding dams. Areas along access tracks/roads and areas within the vicinity of private residences were also highly disturbed. Large paddocks within the overall study area have been extensively cleared and cultivated. The ground cover was characterised by recently sown grasses, resulting in low ground visibility within the majority of the study area.

All survey units were inspected on foot. The location of each survey unit was documented on an aerial map, with observations made during the inspection documented by the survey team. Each survey area was photographed and an assessment was made of archaeological potential (high, moderate or low) based on the location of identified sites, landforms and disturbance.

Survey commenced in the north-eastern corner of the study area in Survey Unit 1. This survey unit was mostly comprised of large irrigation dams formed along an existing drainage depression associated with Anthony Creek, flooding across the creek flats to South Creek. Areas of exposure along the edges of the irrigation dams were checked for any Aboriginal objects. While large parts of this survey unit were inundated at the time of survey, visibility on exposures was good in comparison to the remaining two survey units.

Previously identified PAD area MSC 1 was relocated on the creek flats adjacent to South Creek in Survey Unit 1. MSC 1 was reassessed during the survey. The PAD was previously identified in a portion of land between the irrigation dam in the north eastern corner of the study area and South Creek. The area was considered to exhibit moderate archaeological potential where small topographic rises were elevated above the flood effects of South Creek. The PAD area was inspected for changes in condition, including vegetation growth and disturbance. The current survey recording was consistent with the previous recording of the area.

Creek flats located within Survey Unit 1 contained widespread sheet erosion exposures. Previously identified artefact scatter site MSC 2 was relocated and reassessed during survey. The site was originally recorded as a large artefact scatter on a surface which had suffered from a washout, where water movement has eroded the topsoil and left artefacts on the surface. A reduction in dam levels since previous inspection had resulted in further erosion of the ground surface and increased the extent of the visible artefact scatter. Exposures were re-inspected for artefacts and a new sample of artefacts present at the site was recorded. More than 100 artefacts were counted on the surface and GPS coordinates of the site were updated to reflect changes to the size and location of the artefact scatter. The location of previously identified artefact scatter site OPR-15 North could not be revisited due to inundation. The site was initially identified along a small modified creek line, located along the south eastern boundary of the study area however water levels in the dam have increased significantly since the time of the original recording. The site retains archaeological potential.

Inspection of exposures along the banks of Anthony Creek located in Survey Unit 1 did not identify any new sites. Erosion along the creek bank had occurred as a result of cattle movement and past flooding events associated with the drainage depression landform. Previously recorded site OPR-9 was located on the banks of Anthony Creek. Areas of archaeological potential were identified at site OPR-9, particularly within the slope landforms located above the flood effects of Anthony Creek.



**Plate 1.** View facing south of Survey Unit 1 between South Creek and the northern irrigation dam.



**Plate 2.** View facing west of Survey Unit 1 overlooking northern irrigation dam and site MSC 2.

Visibility within Survey Unit 2 was very low as a result of recently cultivated paddocks. The majority of the survey unit consisted of slopes, with drainage depression and crest landforms also present. One newly identified artefact scatter (Pondicherry AFT 1) was recorded in this survey unit and had an associated area of archaeological potential, identified across a slope and crest landform near a tributary creek line. Ground surface visibility was mostly present in the form of cattle tracks, within exposures present along the edges of dams, access tracks, roads and fence lines or disturbed areas associated with private residences. Where areas of exposure were present, they were inspected for Aboriginal objects.



**Plate 3. Photograph showing ground surface disturbance from recent soil cultivation in Survey Unit 2.**



**Plate 4. Photograph of Survey Unit 2 demonstrating drainage depression and lower slope landforms.**

Previously identified PAD 2038-6 was relocated and reassessed during survey. The PAD area was located within close proximity to optic fibre cabling and associated installation poles. Small ground exposures present within the PAD area were checked for Aboriginal objects, however none were identified. Broken ironstone concretions and yellowish sandstone and siltstone were identified on exposures. The current survey noted that the entirety of the PAD area had been recently ploughed to the fence line. The area is highly disturbed.



**Plate 5. Evidence of disturbance along fence line as a result of cattle movement across Survey Unit 3.**



**Plate 6. View facing north east of tree coverage and dam construction within Survey Unit 3.**

Survey Unit 3 consisted of the central portion of the study area and contained crest, slope and drainage depression landforms. The majority of the survey unit was covered in low maintained grasses with groups of mature and young trees present on crest landforms. Visibility within the survey unit was generally low, with few exposures identified along fence lines and along the edges of constructed dams. This portion of the study area contained two private residences located on the two crest landforms joined by a short saddle above a drainage depression. One newly identified artefact scatter (Pondicherry AFT 2) was recorded within Survey Unit 3.

Overall ground surface visibility across the study area was low, primary limited to vehicle tracks, erosion scours and cleared areas associated with agricultural practices or private residences within the study area. Primary ground cover was low mown grasses or recently sown grasses in paddocks. Widespread tree clearance has taken place across the entirety of the study area, with instances of scattered mature and young tree coverage on crests, near creeks and tributaries, or within the vicinity of houses.

Details of survey and landform coverage are outlined in Tables 4 and 5 below.

**Table 4. Survey coverage**

Survey Unit	Landform	Area (m <sup>2</sup> )	Exposure (%)	Visibility (%)	Effective Coverage (m <sup>2</sup> )	Effective Coverage (%)
1	Slope	63020	10	20	6302	10
	Flat	141210	50	60	70605	50
	Open Depression	440260	20	50	88052	20
2	Crest	53090	30	40	15927	30
	Slope	664320	10	30	66432	10
	Flat	6590	15	20	988.5	15
	Open Depression	173050	15	20	25957.5	15
3	Crest	32180	20	30	6436	20
	Slope	374830	15	20	56224.5	15
	Flat	262930	15	30	39439.5	15
	Open Depression	143770	30	40	43131	30

**Table 5. Landform coverage**

Landform	Area (m <sup>2</sup> )	Area Effectively Surveyed (m <sup>2</sup> )	% of Landform Effectively Surveyed	# of Sites/PADs
Crest	85270	22363	26.2	2
Slope	1102170	128958.5	11.7	2
Flat	410730	111033	27	1
Open Depression	757080	157140.5	20.7	2



## 9 Results

### 9.1 Aboriginal cultural heritage sites in the study area

In total, seven Aboriginal archaeological sites/PADs have been identified within the study area. Assessment and analysis of background information indicated that five registered archaeological sites/PADs were previously recorded within Pondicherry. Archaeological field survey relocated and confirmed the five previously identified sites/PADs and identified two previously unrecorded sites. One previously recorded site (OPR-15 North) was determined to be located within the study area, but covered by current dam levels. Identified sites within the precinct consist of five artefact scatters and two areas of PAD.

Sites are summarised in Table 4, with their locations shown on Figure 6. Site descriptions are presented in section 9.2 for newly recorded sites and section 9.3 for previously recorded sites.

**Table 6. Sites identified within the study area**

Site Name	AHIMS	GDA	Landform	Water Source	Site Type	Site Summary
MSC 1	N/A	292601E 6237624N	Creek flats	South Creek	PAD	An area of archaeological potential located adjacent to South Creek within the study area.
MSC 2	45-5-4909	292264E 6237219N	Drainage depression / flat	Anthony Creek	Artefact scatter	Open artefact scatter located on exposed former bank of Anthony Creek, which is now a partially submerged basin.
OPR-9	45-5-3367	291163E 6236351N	Drainage depression / slope / creek flats	Anthony Creek	Artefact scatter	Low density artefact scatter situated on the slopes and creek flats adjacent to Anthony Creek.
OPR-15 North	45-5-4950	291937E 6236747N	Drainage depression / flat	Anthony Creek	Artefact scatter	Open artefact scatter located underneath a fully submerged irrigation dam.
PAD 2038-6	45-5-4035	290650E 6236896N	Crest	Drainage line	PAD	PAD located on a spur running northeast of the hillcrest located on the western boundary of the study area, adjacent to The Northern Road.
Pondicherry AFT 1	45-5-4959	290806E 6237328N	Drainage depression / slope	Drainage line	Artefact scatter	Low density artefact scatter located on an old drainage line, on gentle slopes off ridgeline, adjacent to The Northern Road.
Pondicherry AFT 2	45-5-4958	291413E 6237278N	Drainage depression / slope / crest	Drainage line	Artefact scatter	Low density artefact scatter located on the mid slopes of a drainage depression leading west up to a saddle in the central portion of the study area.

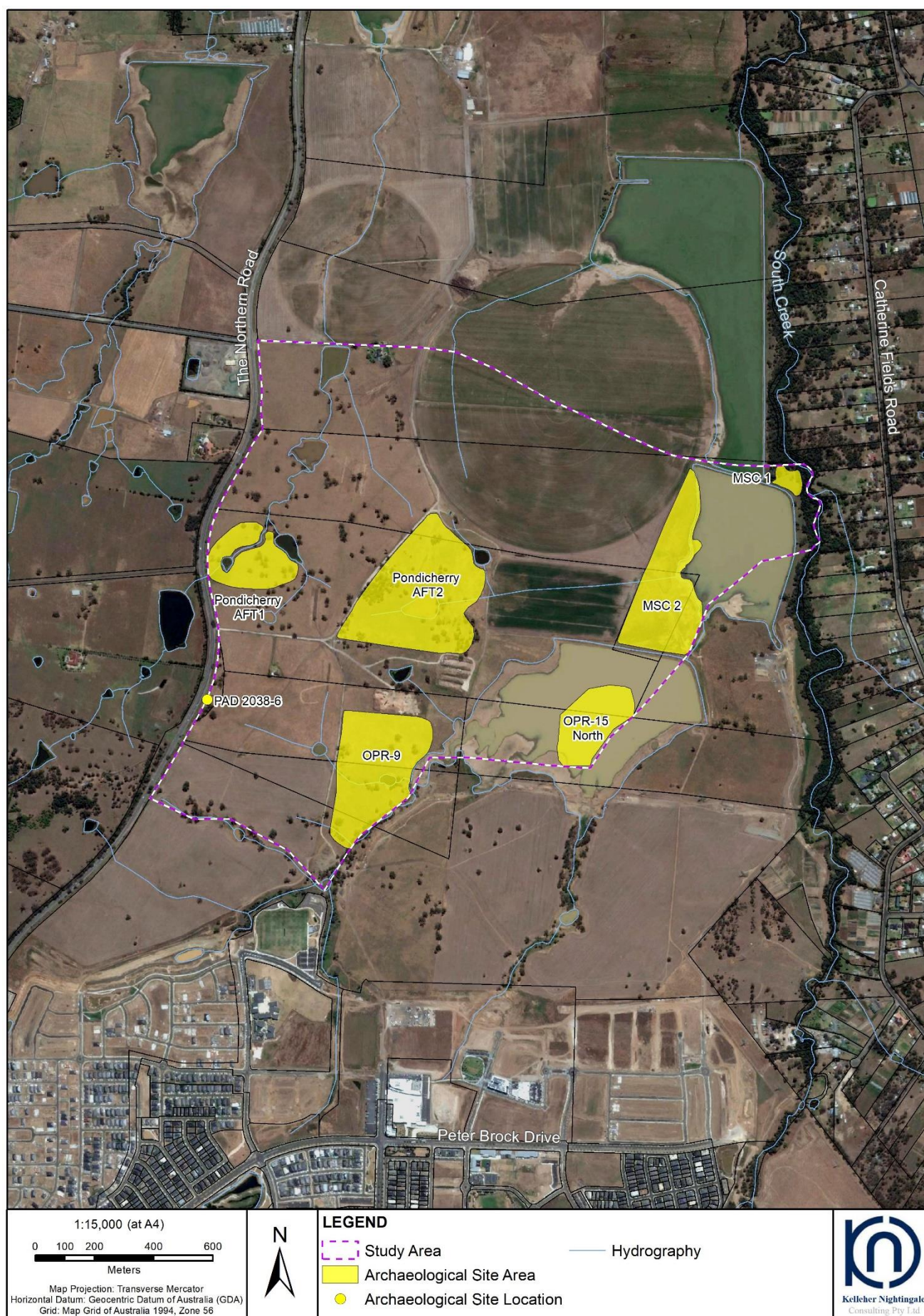


Figure 6. Survey results – identified sites/PADs within Pondicherry



## 9.2 Newly recorded sites identified in the study area

<b>Site Name:</b>	<b>Pondicherry AFT 1</b>
<b>AHIMS ID:</b>	45-5-4959
<b>Site Type:</b>	Open context artefact site
<b>Site Coordinates:</b>	290806E 6237328N
<b>Landform:</b>	Drainage depression / lower slope

Pondicherry AFT 1 was an artefact site identified on the lower slopes of a spur running adjacent to the western side of a former drainage line. The site was located 90 metres east of the western boundary of the study area along The Northern Road. A series of online dams have been constructed along a first order tributary, although the tributary has become overgrown.

The site area has archaeological potential due to relatively low levels of disturbance and its landform context above a drainage line of South Creek. An area of moderate archaeological potential associated with the site was also located on the eastern side of the drainage line.

A petrified wood/jasper flaked piece was identified on an exposure measuring approximately 57 x 7 metres along the margins of one of the online dams. Landform was the base of a gentle slope between two spurs coming off a ridgeline.

Based on landform context, identified artefacts and low levels of visible disturbance, Pondicherry AFT 1 has moderate potential for intact archaeological deposit.



**Plate 7. Location of artefact identified at Pondicherry AFT 1 on edge of dam.**



**Plate 8. Artefact identified at Pondicherry AFT 1.**



**Plate 9. Drainage depression landform associated with Pondicherry AFT 1 facing north.**



**Plate 10. Pondicherry AFT 1 facing north east, showing gentle sloping towards the north, above the former drainage line at left.**

<b>Site Name:</b>	<b>Pondicherry AFT 2</b>
<b>AHIMS ID:</b>	45-5-4958
<b>Site Type:</b>	Open context artefact site
<b>Site Coordinates:</b>	291413E 6237278N
<b>Landform:</b>	Drainage depression/ slope/ crest

Pondicherry AFT 2 was identified within the central portion of the study area. A distal flake fragment of siliceous tuff was identified on an exposure on a dam wall. The site was identified on the edge of a dam located within a drainage depression landform. Local shale fragments and ironstone concretions were also identified at the site. The site was located approximately 130 metres southeast of a house and access road.

The assessed site area extends around the identified artefact location based on the presence of suitable landforms and relatively low levels of disturbance. The site area is considered to have moderate potential for intact subsurface archaeological deposit.

Despite the heavy disturbance associated with the construction of the dam, the landforms present within this site have been previously demonstrated as archaeologically sensitive within the wider region and are considered to display moderate potential.



Plate 11. Artefact identified at site Pondicherry AFT 2.



Plate 12. Artefact location at Pondicherry AFT 2 facing south east. Artefact identified on the edge of a high dam wall.



Plate 13. View facing west of Pondicherry AFT 2, demonstrating sloping towards drainage depression.



Plate 14. Pondicherry AFT 2 positioned along the slopes of the saddle landform.



### 9.3 Previously recorded sites identified in the study area

All previously recorded Aboriginal archaeological sites/PADs within the study area were revisited as part of the current field survey and assessment. Revisitation aimed to assess current site conditions and define site boundaries in relation to the study area. A summary of each site inspection is presented below.

<b>Site Name:</b>	<b>MSC 1</b>
<b>AHIMS ID:</b>	N/A
<b>Site Type:</b>	Potential Archaeological Deposit
<b>Site Coordinates:</b>	292601E 6237624N
<b>Landform:</b>	Creek flat

MSC 1 was an area of potential archaeological deposit identified within the north eastern corner of the study area. The PAD was located along the north eastern boundary of an irrigation dam in close proximity to the major resource zone of South Creek. The fence line of the property is within 30 metres of the PAD area.

The area has moderate potential to contain intact subsurface archaeological deposit. This is more likely to occur within small microtopographic rises above the primary flood zone.



**Plate 15. MSC 1 facing east towards South Creek showing area of archaeological potential.**



**Plate 16. MSC 1 facing east demonstrating small microtopographic rise.**

**Site Name:** MSC 2  
**AHIMS ID:** 45-5-4909  
**Site Type:** Open context artefact site  
**Site Coordinates:** 292264E 6237219N  
**Landform:** Drainage depression/ flat

Site MSC 2 (45-5-4909) was a large artefact scatter relocated on the western edges of an irrigation dam on a gentle lower hillslope landform. The previously identified site was located on the former banks of Anthony Creek which is now partially submerged by a large basin. At least 55 artefacts were initially identified on an extensive sheet erosion exposure.

The site was revisited during the current survey. The extent of the visible artefact scatter was approximately 150 metres. Over 100 surface artefacts were observed across the site area during the current survey and the site is considered to retain moderate potential for subsurface deposits due to favourable landform context. Some localised surface disturbances were evident due to washout, with occasional artefacts exposed atop B horizon clays; however, other portions of the site display better potential and lower levels of disturbance.

**Table 7. Sample of artefacts identified at MSC 2**

Raw material	Artefact type	L (mm)	W (mm)	Th (mm)	Comments
Silcrete	Split flake (R)	23	12	11	Pink, <30% cortex, plunging termination.
Silcrete	Flake	18	13	6	Red, glossy, focal platform, plunging, zero cortex.
Silcrete	Medial flaked fragment	14	8	4	Red, glossy, zero cortex.
Silcrete	Flaked piece	13	11	3	Pink, slight lustre.
Silcrete	Retouched proximal fragment	7	9	4	Grey, plain platform, retouched right margin.
Petrified wood	Retouched flake/ backed Elouera?	31	20	10	Grey brown, backing retouched along left margin, chord, tiny edge fracture, thick backed, possible usewear, zero cortex, no intact platform.
Silcrete	Distal flake fragment	16	17	7	Red, feather termination, zero cortex.
Quartz	Proximal fragment	7	8	2	Good quality, milky, crushed platform, zero cortex.
Silcrete	Backed proximal fragment	18	14	8	Pink, platform faceted, old distal break, zero cortex.
Silcrete	Flake	22	11	8	Grey, purple scarred platform, plunging termination, dorsal ridge has blade core platform scars (rotated).
Silcrete	Retouched flake	31	24.5	7.0	Red, slight lustre, scarred platform. Distal break, retouch on both lateral margins.
Grey tuff	Angular fragment	28	28	8.5	Crenate fracture on one surface



Plate 17. Artefact identified at MSC 2.



Plate 18. Artefact identified at MSC 2.



Plate 19. View of MSC 2 facing north east, with irrigation dam in the background, and sheet erosion exposure in the foreground.



Plate 20. Sample of artefacts recorded at MSC 2.



Plate 21. Flagged locations of identified artefacts within areas of exposure at MSC 2. Photo facing north.

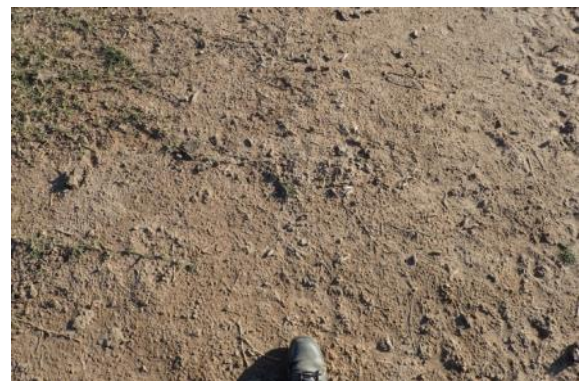


Plate 22. Photo of MSC 2 demonstrating good visibility on sheet erosion exposure.

<b>Site Name:</b>	<b>OPR-9</b>
<b>AHIMS ID:</b>	45-5-3367
<b>Site Type:</b>	Open context artefact site
<b>Site Coordinates:</b>	291163E 6236351N
<b>Landform:</b>	Drainage depression/ slope/ creek flat

Site OPR-9 (AHIMS ID 45-5-3367) was an artefact scatter previously identified along the bank of Anthony Creek. Artefacts identified previously included flake fragments and a core. Raw materials consisted of red and purple silcrete, cream and grey tuff and quartz.

The current survey revisited the recorded site location but did not relocate the previously recorded artefacts. The site area extends across the lower slopes bordering Anthony Creek which is positioned between a series of low ridge spurs. It was assessed that the site displayed moderate potential for intact archaeological deposits based on the low levels of disturbance in portions of the site as well as its positioning above the direct flood effects of Anthony Creek.



**Plate 23. Site OPR-9 facing north showing lower slope landform adjacent to Anthony Creek.**



**Plate 24. Location of site OPR-9 on the creek flats adjacent to Anthony Creek, facing south.**



<b>Site Name:</b>	<b>OPR-15 North</b>
<b>AHIMS ID:</b>	45-5-4950
<b>Site Type:</b>	Open context artefact site
<b>Site Coordinates:</b>	291937E 6236747N
<b>Landform:</b>	Drainage depression/ flat

Site OPR-15 North (AHIMS ID 45-5-4950) was a large high density artefact scatter initially recorded along the bank of Anthony Creek and existing drainage channels. OPR-15 North was the northern extension of previously recorded site OPR-15 (within the Oran Park Precinct).

The recorded site location was confirmed to be located within the south eastern corner of the study area, however the site is currently underwater. The large irrigation dam to the northeast of Anthony Creek has a significantly increased water level since the site's original recording. Edges of the irrigation dam were inspected for artefacts associated with the site, however where the ground surface was visible, the disturbance was extensive due to cattle movement.



**Plate 25. OPR-15 North currently underneath the irrigation dam water level.**



**Plate 26. Example of disturbance present on the edge of the dam covering OPR-15 North.**

**Site Name:** PAD 2038-6  
**AHIMS ID:** 45-5-4035  
**Site Type:** Potential Archaeological Deposit  
**Site Coordinates:** 290650E 6236896N  
**Landform:** Crest

PAD 2038-6 (AHIMS ID 45-5-4035) was located in the western part of the study area. The PAD area was revisited during the current survey and found to be disturbed by optic fibre cabling and associated installation poles. Small ground exposures present within the PAD area were checked for Aboriginal objects, however none were identified. Broken ironstone concretions and yellowish sandstone and siltstone were identified on exposures. The current survey noted that portions of the site had been recently ploughed to the fence line.

PAD 2038-6 was determined to contain low to nil archaeological potential for intact deposit due to the high level of subsurface disturbance resulting from utilities and road infrastructure within the site area. The area is highly disturbed.



**Plate 27. PAD 2038- 6 facing north, showing exposure and utilities infrastructure.**



**Plate 28. PAD 2038-6 located along the property fence line adjacent to The Northern Road.**

## 10 Significance Assessment

### 10.1 Assessment Criteria

One of the primary steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984; Pearson and Sullivan 1995: 7). The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long term outcomes for future generations as the nature of what is conserved and why, also changes over time.

The assessment of significance is a key step in the process of impact assessment for a proposed activity as the significance or value of an object, site or place will be reflected in resultant recommendations for conservation, management or mitigation.

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) requires significance assessment according to criteria established in the *Australia ICOMOS Burra Charter, 1999* (Australia ICOMOS 1999). The *Burra Charter* and its accompanying guidelines are considered best practice standard for cultural heritage management, specifically conservation, in Australia.

Guidelines to the *Burra Charter* set out four criteria for the assessment of cultural significance:

- Aesthetic value - relates to the sense of the beauty of a place, object, site or item;
- Historic value - relates to the association of a place, object, site or item with historical events, people, activities or periods;
- Scientific value - scientific (or research) value relates to the importance of the data available for a place, object, site or item, based on its rarity, quality or representativeness, as well as on the degree to which the place (object, site or item) may contribute further substantial information; and
- Social value - relates to the qualities for which a place, object, site or item has become a focus of spiritual, political, national or other cultural sentiment to a group of people. In accordance with the *Heritage NSW Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, the social or cultural value of a place (object, site or item) may be related to spiritual, traditional, historical or contemporary associations. "Social or cultural value can only be identified through consultation with Aboriginal people" (OEH 2011:8).

The assessment of these values are brought together to form a comprehensive assessment of significance.

The Sydney Growth Centre precinct assessment method for Aboriginal cultural heritage establishes a process for ranking cultural heritage values in the study area based on the *Burra Charter* criteria. The process is based on identifying cultural heritage values and ranking them from exceptional value to no value (if any) to assist in making decisions about the future development layout of the precinct.

The precinct assessment method provides a consistent means of assessing Aboriginal places and values across precincts within the Sydney Growth Centres. The assessment criteria are based on established criteria of the NSW Heritage Branch (formerly NSW Heritage Office), which are themselves based on addressing the *Burra Charter* criteria.

These criteria are:

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

These criteria involve the assessment of both the cultural and scientific significance of a place or area, in that they incorporate both archaeological or scientific significance and the importance and values placed on these areas by the Aboriginal community. Based on this concept, a significance ranking system was developed to be applied across all precincts within the Sydney Growth Centres.





Ranking	Example justifications	Suggested mapping colour
Exceptional	<ul style="list-style-type: none"> <li>• Rare example of its type in the nation, state or outstanding example of its type in the region; and / or</li> <li>• Irreplaceably expresses Aboriginal cultural heritage, history or stories of the region (or State or nation); and / or</li> <li>• Of primary and essential importance to the identity and culture of the Aboriginal communities of the region; and / or</li> <li>• Intact with no disturbance; and / or</li> <li>• Loss or unsympathetic or further disturbance or change <i>will irreversibly</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct.</li> </ul>	Red with black hatching 
High	<ul style="list-style-type: none"> <li>• Rare example of its type in the region; and / or</li> <li>• Expresses (possibly in combination with other places or features) the Aboriginal cultural heritage, history or stories of the region; and / or</li> <li>• Important to the identity and culture of the Aboriginal communities of the region; and / or</li> <li>• Existing disturbance and evidence of change does not detract from Aboriginal cultural heritage significance; and / or</li> <li>• Loss or unsympathetic or further disturbance or change <i>is likely to</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct.</li> </ul>	Red 
Moderate	<ul style="list-style-type: none"> <li>• Rare example of its type in the Precinct, but not the region (or Growth Centre); and / or</li> <li>• Expresses in combination with other places or features the Aboriginal cultural heritage, history or stories of the region; and / or</li> <li>• Contributes to the identity and culture of the Aboriginal communities of the region; and / or</li> <li>• Existing disturbance and evidence of change does not detract from Aboriginal cultural heritage significance of the place; and / or</li> <li>• loss or unsympathetic or further disturbance or change <i>may</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct.</li> </ul>	Yellow / orange 
Some	<ul style="list-style-type: none"> <li>• Common example of its type in the Precinct; and / or</li> <li>• Does not express clear community or cultural values of the precinct or only in a minor way; and / or</li> <li>• Substantially modified or impacted; and / or</li> <li>• Loss or change <i>is unlikely</i> to diminish Aboriginal cultural heritage significance of the Precinct and/or applicable Aboriginal community cultural identity.</li> </ul>	Blue / none 

Figure 7. Precinct Assessment Method significance rankings



## 10.2 Statement of Scientific significance

A total of seven known Aboriginal archaeological sites or areas of potential archaeological deposit occur within Pondicherry, ranging from low to moderate scientific significance or potential. The sites are mostly artefact scatters in open contexts, consistent with predictions for the study area. Sites located in intact areas, generally raised areas outside of flood prone lands retain archaeological integrity and have some research potential to further our understanding of past Aboriginal occupation and use of the study area and surrounds.

A summary of scientific significance/potential of sites in the study is listed in the table below:

**Table 8. Assessed Significance/potential of sites in the study area**

Moderate significance/potential	Low significance/potential
MSC 1 MSC 2 Pondicherry AFT 1 Pondicherry AFT 2 OPR-9 OPR-15 North	PAD 2038-6

Areas of moderate scientific significance/potential demonstrated a broad archaeological assemblage and were likely to contain archaeological deposit. Significance was attached to the relatively intact nature of the soil and identified or expected range of artefacts. Furthermore, landform was an important factor in assessing significance/potential because it is associated with preservation of archaeological deposit and it relates to the range of expected archaeological activities. For example, raised terraces are more likely to contain intact archaeology than the creek valleys and the archaeological activities on hill tops will differ from creek flats.

Areas of low scientific significance/potential have been affected by context disturbance such as ploughing, rising dam levels, more severe erosion and installation of utilities.

## 11 Legislation and Management Principles

### 11.1 Legislative considerations

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act.

Under the Act, an “Aboriginal object” is defined as “any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”. As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

Areas of special significance, which may or may not include Aboriginal objects, can be recognised and protected (and regulated) if declared as an Aboriginal place. Under section 84 of the NPW Act a place can be declared by the Minister as an Aboriginal place if the place “is or was of special significance with respect to Aboriginal culture”. The NPW Act protects and regulates declared Aboriginal places. Section 86(4) states that “A person must not harm or desecrate an Aboriginal place”. Section 5 of the NPW Act defines an Aboriginal place as “any place declared to be an Aboriginal place under section 84”. The amendments to the NPW Act that came into effect on 1<sup>st</sup> October 2010 have increased the offences and penalties, with harming or desecrating an Aboriginal place being on the highest tier for penalties.

Aboriginal objects and Aboriginal places are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)]. It is an offence to harm or desecrate an Aboriginal place [section 86 (4)].

There are offences and penalties relating to harm to, or desecration of, an Aboriginal object or declared Aboriginal place. Harm includes to destroy, deface, damage or move. Penalties are tiered according to offences, which include:

- a person must not harm or desecrate an Aboriginal object that the person knows is an Aboriginal object;
- a person must not harm or desecrate an Aboriginal object (strict liability offence);
- a person must not harm or desecrate an Aboriginal place (strict liability offence);
- failure to notify Heritage NSW of the location of an Aboriginal object (existing offence and penalty); and
- contravention of any condition of an Aboriginal Heritage Impact Permit.

Under section 87 (1) it is a defence to a prosecution for an offence under section 86 (1), (2) or (4) if “(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened”.

Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if “the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed”. This defence appears to specifically relate to Aboriginal objects.

Section 89A of the Act relates to the notification of sites of Aboriginal objects, under which it is an offence if the location of an Aboriginal object is not notified to the Director-General in the prescribed manner within a reasonable time.

Under section 90 (1) of the Act “the Director-General may issue an Aboriginal heritage impact permit”. The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act (sections 90 to 90R).

An Aboriginal heritage impact permit (AHIP) is required for any activity which will harm an Aboriginal object or Aboriginal place.

## 11.2 Management principles

Principles for the management of Aboriginal cultural heritage are focussed on the conservation of objects, places or features of cultural value within the landscape, including places, objects and features of significance to Aboriginal people and places of scientific (archaeological) significance.

While there are statutory controls to ensure that Aboriginal objects (sites) are protected and/or regulated, the Aboriginal cultural heritage assessment process is designed to ensure that places or features of cultural value within the landscape and of significance to Aboriginal people are conserved in addition to the sites and objects.

In general, it can be recommended to:

- avoid harm to Aboriginal objects where possible;
- apply for an AHIP for Aboriginal objects where harm cannot be avoided;
- mitigate harm to Aboriginal objects. This would be a particular requirement for sites or areas with moderate or high archaeological or cultural values. An AHIP would be required for mitigation activities; and
- implement ongoing management strategies for avoiding harm to Aboriginal objects.

Any decisions regarding the long term management of conserved sites should be made in consultation with registered Aboriginal stakeholders.



## 12 Indicative Layout Plan Assessment

An Indicative Layout Plan (ILP) for the study area has been developed by GDC 2 in partnership with DPIE and Camden Council. The drafted Pondicherry ILP is shown in Figure 8. The ILP has been considered in relation to identified Aboriginal cultural heritage values within the study area (Figure 9).

### 12.1 Consideration of alternatives – limiting harm

The draft ILP was prepared in consultation with government agencies, stakeholders and landowners and in consideration of the various constraints and opportunities identified for the study area as a result of specialist studies undertaken as part of the precinct planning process, including Aboriginal heritage.

All identified sites within the study area were considered in relation to proposed future development and associated uses of the land. Throughout the precinct planning process it was recommended the development of the ILP avoid harm to Aboriginal objects where possible. Alternative layouts for the ILP were investigated to limit harm to Aboriginal heritage; however these were determined to have a similar level of impact, due to the spread of Aboriginal heritage throughout the study area.

Aboriginal objects are located within developable land within the study area, in elevated areas outside flood prone lands where sites have potential for intact subsurface deposits. Aboriginal objects have also been recorded along Anthony Creek and the tributaries of South Creek. These areas have been identified as being of cultural value to Aboriginal stakeholders. The draft ILP shows these lands as Riparian Corridor, Major Road, Park, Drainage, Sporting Fields, Low Density Residential, Medium Density Residential, Railway Corridor, Lake, Indication School Location, Transmission Easement and Neighbourhood Centre. While no detailed design exists at this stage, it is likely that Riparian Corridors, Parks and Drainage Corridors will contain additional services and infrastructure, such as wastewater carriers, drainage infrastructure and cycleways/pedestrian pathways. Residential zones will likely contain building structures, landscaping and road infrastructure. Such development works would have an impact on Aboriginal objects in these zones.

### 12.2 Ecologically sustainable development

The *National Strategy for Ecologically Sustainable Development* defines ecologically sustainable development as:

using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

The *National Strategy* provides broad strategic directions and a framework for governments to direct policy and decision-making and facilitate a coordinated approach to ecologically sustainable development which encourages long-term benefits for Australia. The strategy was adopted by all levels of Australian government in 1992.

Core objectives of *Ecologically Sustainable Development* (ESD) are to:

- enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations.
- provide for equity within and between generations; and
- protect biological diversity and maintain essential ecological processes and life-support systems.

Stated guiding principles are:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations;
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- the global dimension of environmental impacts of actions and policies should be recognised and considered;
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised;
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised;
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms; and
- decisions and actions should provide for broad community involvement on issues which affect them.

The National Strategy requires a balanced approach that takes into account all objectives and principles equally to pursue the goal of ESD.

The development of the draft ILP has evaluated the potential harm of future development of Pondicherry on Aboriginal archaeological heritage in terms of ESD. The assessment of Aboriginal heritage evaluated long-term and short-term considerations, precautionary environmental impacts, enhancement for future generations and cost/benefit of impacting on archaeological objects.

Aboriginal sites will be impacted by future development of Pondicherry. In this regard, following ESD, the long-term impact is significant as physical evidence in context will be removed. However, information held by these sites can be obtained through salvage excavation of significant sites. This can be seen as mitigating impact by increasing our knowledge base regarding Aboriginal culture, thus giving future generations a high cost benefit ratio. Outright conservation without an understanding of that which is being conserved has little scientific or cultural value. The information base resulting from salvage excavation of Aboriginal objects at Pondicherry will assist in increasing an understanding and interpretation of occupation and use of the area by Aboriginal people in the past, connecting to those values being retained in surrounding conservation areas (e.g. Oran Park to the south of the study area).

### **12.3 Impact of future development based on ILP**

Aboriginal sites have been identified over much of the study area and will be impacted according to the ILP. The larger, less disturbed identified Aboriginal sites were located across the western, central and eastern portions of the study area. These sites were identified in locations associated with drainage lines and elevated landforms within the landscape. Mitigation measures would be required for these sites.

Based on the assessment of the ILP in relation to Aboriginal sites recorded within the study area, potential impacts, management and mitigation measures are outlined in Table 9.

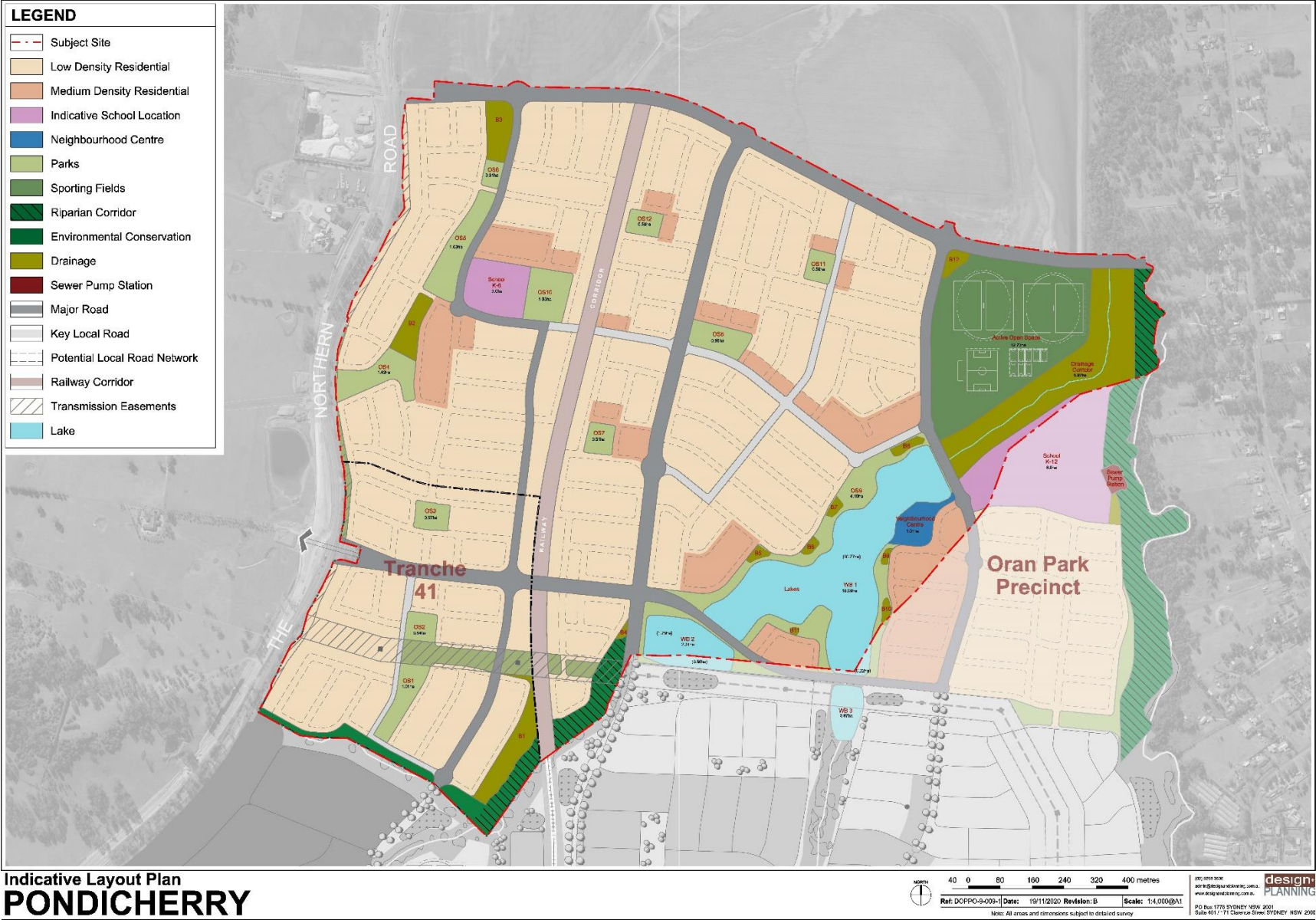


Figure 8. Indicative Layout Plan



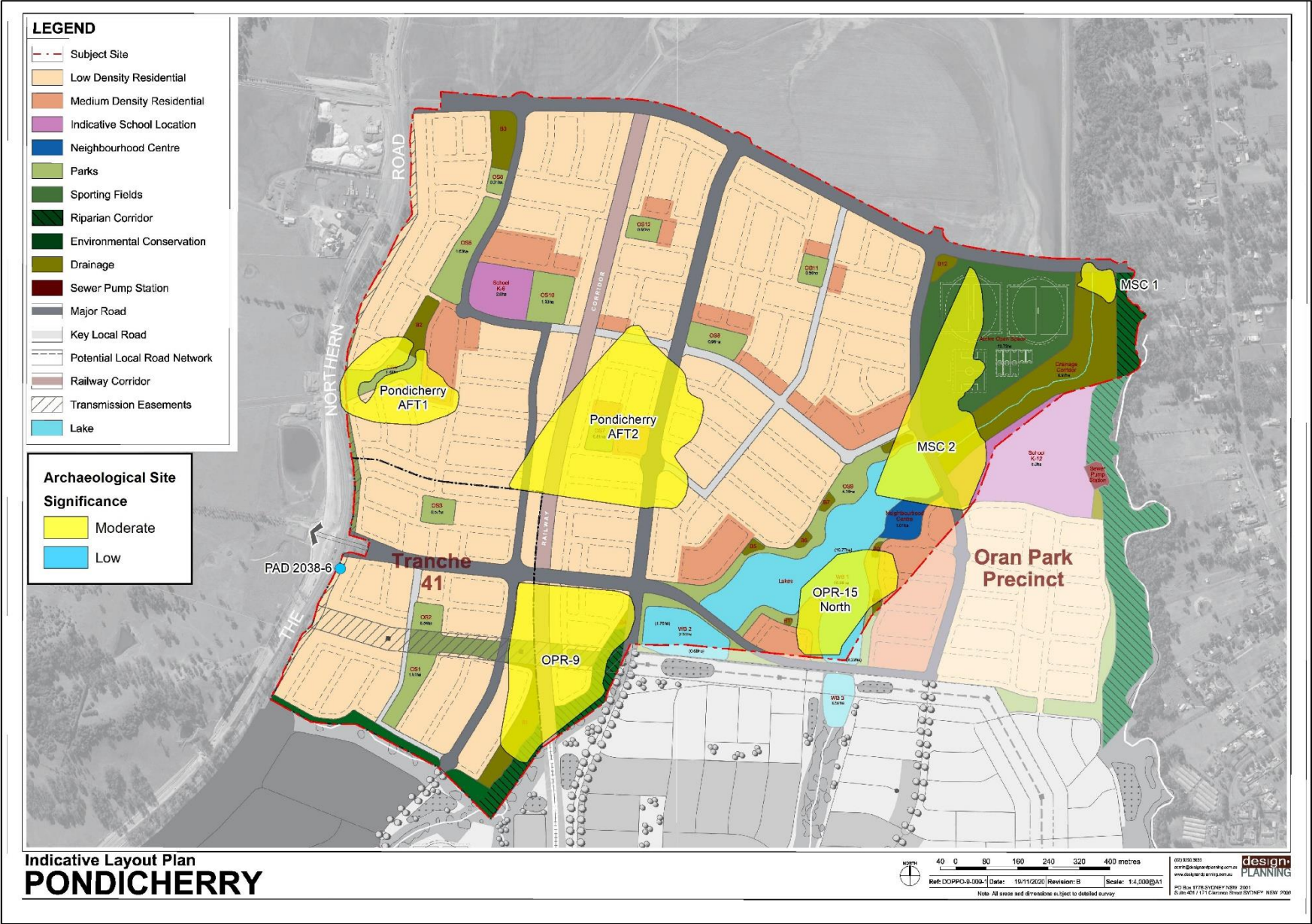


Figure 9. Indicative Layout Plan with Aboriginal heritage

Table 9. Impacts, mitigation and management (based on Indicative Layout Plan)

Site Name	Site Type	Description / Summary	Significance	Impact Assessment	ILP Zoning	Approvals / Mitigation
MSC 1	PAD	An area of archaeological potential located adjacent to South Creek within the study area.	Moderate	Impacted	Drainage Major Road	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.
MSC 2	Artefact scatter	Open artefact scatter located on exposed former bank of Anthony Creek, which is now a partially submerged basin.	Moderate	Impacted	Drainage Indicative School Location Lake Major Road Medium Density Residential Neighbourhood Centre Park Sporting Fields	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.
OPR-9	Artefact scatter	Low density artefact scatter situated on the slopes and creek flats adjacent to Anthony Creek.	Moderate	Impacted	Low Density Residential Major Road Park Railway Riparian Corridor Transmission Easement	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.
OPR-15 North	Artefact Scatter	Open artefact scatter located underneath a fully submerged irrigation dam.	Moderate	Impacted	Drainage Lake Medium Density Residential Park	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.
PAD 2038-6	PAD	PAD located on a spur running northeast of the hillcrest on western boundary of study area, adjacent to The Northern Road.	Low	Impacted	Low Density Residential	<b>AHIP</b> Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
Pondicherry AFT 1	Artefact scatter	Low density artefact scatter located on an old drainage line, on gentle slopes off ridgeline, adjacent to The Northern Road.	Moderate	Impacted	Drainage Low Density Residential Medium Density Residential Park	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.
Pondicherry AFT 2	Artefact scatter	Low density artefact scatter located on the mid slopes of a drainage depression leading west up to a saddle in the central portion of the study area.	Moderate	Impacted	Key Local Road Low Density Residential Major Road Medium Density Residential Park Railway	<b>AHIP and salvage</b> Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site and degree of proposed impact, salvage excavation of a representative sample of the site is required prior to impact.

## 13 Connecting with Country Draft Framework

The Government Architect NSW (GANSW) provides strategic design leadership in architecture, urban design and landscape architecture. The GANSW *Connecting with Country* draft framework is being developed by Aboriginal professionals within NSW government in collaboration with Aboriginal Traditional custodians and knowledge-holders to provide a practical way in which communities, local government, government agencies, industry and developers can respond to changes and new directions in planning policy relating to Aboriginal culture and heritage, as well as place-led design approaches.

Specifically, it is noted in the draft framework that ‘the ambition of the commitment to improving health and wellbeing of Country is to help realise three long-term strategic goals’ (GANSW 2020):

- reduce the impacts of natural events such as fire, drought, and flooding through sustainable land and water use practices
- value and respect Aboriginal cultural knowledge with Aboriginal people co-leading design and development of all NSW infrastructure projects
- ensure Country is cared for appropriately and sensitive sites are protected by Aboriginal people having access to their homelands to continue their cultural practices.

The *Connecting with Country* draft framework is currently being tested through several government projects within a pilot program and is not specifically intended to be considered in relation to Aboriginal archaeological and cultural heritage assessments. The Aboriginal archaeological and cultural heritage of the Pondicherry precinct has been assessed in accordance with relevant Aboriginal heritage assessment requirements and guidelines, governed under the *National Parks and Wildlife Act 1974* and the *National Parks and Wildlife Regulation 2019*. Consideration of the relevant *Connecting with Country* strategies and principles for action in the current Aboriginal heritage assessment context, while not required, assists in developing and promoting a more holistic view of how Aboriginal cultural heritage can be integrated into the Pondicherry Precinct design and development planning process.

Several commitments for action have been identified within the *Connecting with Country* draft framework, with principles for action outlined for these commitments. These commitments for action are being utilised as a measure for implementing the *Connecting with Country* draft framework during the pilot program. These draft commitments are being actively considered for the Pondicherry Rezoning project. Two main strategies have been considered within the *Connecting with Country* draft framework as a starting point for the *Connecting with Country* pilot program. These include ‘Pathways for connecting’ and ‘considering project life cycles with Aboriginal perspectives’ (GANSW 2020). Pathways for connecting are aimed at developing cultural awareness. Cultural awareness and the prioritisation of Country in turn leads to the establishment of project plans and project life cycles which consider an Aboriginal perspective.

### 13.1 Pathways for connecting

Four initial pathways have been identified as a starting point for developing cultural awareness, thus creating an opportunity for better project planning within the *Connecting with Country* framework. The identified pathways have been developed based on four key areas: cultural expression, relationship with Country, learning from Country and knowledge-sharing (GANSW 2020). Strategic ways of engaging with these ideas have been identified in the following:

- **Pathway 1:** Learning from first languages and place names
- **Pathway 2:** Develop mutually beneficial relationships with Country
- **Pathway 3:** Reawakening memories of cultural landscapes
- **Pathway 4:** Finding common ground

These pathways have been considered in relation to Aboriginal archaeological and cultural heritage for the Pondicherry Precinct project, and may be used to inform future heritage interpretation planning and design.

Engaging with first languages and placenames (Pathway 1) provides an opportunity to begin to understand the relationship between Aboriginal people and Country. One practical form of engagement is to consider first languages and placenames when naming and designing streets, parks, open public spaces, riparian corridors, schools, neighbourhood centres, and sporting fields. Learning from first languages and considering the meaning and importance of placenames, as they relate to the Pondicherry Precinct, will also lead to additional ways of incorporating an Aboriginal perspective into the design and planning of the precinct. Engaging with first languages and placenames should work towards developing cultural awareness, and providing better outcomes for the local Aboriginal and non-Aboriginal community and the environment.

The development of mutually beneficial relationships with Country (Pathway 2) is centred around the notion that 'Aboriginal people believe that Country has a spirit and is living' and that there is both a 'collective and individual responsibility and obligation to care for Country as if she were family' (GANSW 2020, 22). A reciprocal relationship with Country means making decisions affecting country that do not only benefit people, but address the needs of Country. Steps taken towards developing this relationship may include placing emphasis on landscaping design which incorporates retaining old growth native vegetation and re-introducing indigenous plant species within public open spaces and along waterways, as well as protecting and revitalising riparian corridors and providing healthy habitats for native animals and aquatic life. Restoring existing waterways and dams to a more natural state from their current agricultural setting would also work towards repairing and healing the relationship with Country. Overall design and maintenance of all aspects of the precinct should also consider the use of sustainable and environmentally friendly resources to promote sustainable land management and development.

Reawakening memories of cultural landscapes (Pathway 3) introduces an opportunity of learning from Country. One of the examples of a way in which one can learn from Country is by walking on Country. Walking Country involves 'deep listening to develop an understanding of the special purpose of that place', it is a cultural practice which, when guided by Traditional Custodians, provides a deeper and more visceral spatial understanding of Country (GANSW 2020, 23). Members of the local Aboriginal community and registered Aboriginal stakeholders for the project have actively participated in the archaeological survey of the project area. This has helped inform the cultural significance of the landscape and the significance of Aboriginal archaeology identified as part of the archaeological assessment.

Further opportunities to consider cultural and physical landscapes of importance may include retaining the physical connection between the Aboriginal archaeological sites identified along the Anthony Creek and South Creek watercourses. These sites may remain connected through the protection of vistas and/or interacting with the watercourses through specifically designed pathways. Vistas and pathways from the ridgeline with the study area, across the South Creek floodplain to the South Creek watercourse should be maintained, to provide continuity of the cultural and physical landscape and its use by past Aboriginal people.

As previously identified by registered Aboriginal stakeholders, South Creek is one of the major watercourses of the Cumberland Plain and holds significant Aboriginal cultural value. The Precinct planning and development process should seek to integrate the Aboriginal cultural values of the South Creek corridor into the urban setting and to conserve the cultural value of the South Creek corridor. Continuity of movement and the provision of access along South Creek and its tributary Anthony Creek, should be maintained in order to reflect the significance of the watercourse and the surrounding landscape to the contemporary Aboriginal community. Providing the local Aboriginal and non-Aboriginal community with opportunities to continue to engage with the cultural and physical landscapes of the study area should be considered within the detailed design of the streets, pathways, drainage and watercourses within the study area.

Finding common ground (Pathway 4) involves the sharing of knowledge between Aboriginal and non-Aboriginal communities so as to support the health and wellbeing of Country. When considering ways in which detailed design of the precinct can benefit the community and Country, Pathway 4 offers an opportunity for community-led collective problem-solving and collaboration. The recommendations for *Connecting with Country* should be thoughtfully considered in consultation with the local Aboriginal community.

### 13.2 Considering project life cycles with an Aboriginal perspective

The 'considering project life cycles with an Aboriginal perspective' strategy works towards rethinking the standard approach to delivering design and planning projects. This involves reconsidering the way in which we look at project life cycles. An example of this new way of thinking is provided within the draft framework as follows (GANSW 2020: 26):

- **Project formation** can be understood as an immersive process of **sensing** – the point at which we start with Country.
- **Project design and conceptualisation** can be understood as process of **imagining** – listening to Country.
- **Project delivery** can be understood as a process of **shaping** – designing with Country.
- **Project maintenance** can be understood as part of an ongoing continuum of **caring for Country**.

Ongoing opportunities to consider the Pondicherry rezoning project life cycle with an Aboriginal perspective exist through the imagining, shaping and caring for Country phases of the project. An Aboriginal perspective can be considered through the consideration and implementation of the four aforementioned 'Pathways for connecting'.



## 14 Conclusions and Recommendations

Archaeological investigations have identified a total of seven Aboriginal archaeological sites within Pondicherry. Sites consisted of open artefact scatters and areas of potential archaeological deposit (PAD). These results were consistent with predictions for the study area. Six sites were determined to be of moderate scientific significance/potential significance. One site was determined to be of low scientific significance/potential.

Aboriginal objects are protected and regulated under Part 6 of the *National Parks and Wildlife Act 1974*. It is an offence to harm or desecrate an Aboriginal object without appropriate approval. An Aboriginal heritage impact permit (AHIP) under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object.

Throughout the precinct planning process it was recommended the development of the Indicative Layout Plan (ILP) avoid harm to Aboriginal objects where possible. Assessment of the ILP in relation to Aboriginal heritage of the study area shows that Aboriginal heritage is located within proposed Riparian Corridor, Major Road, Park, Drainage, Sporting Fields, Low Density Residential, Medium Density Residential, Railway Corridor, Lake, Indication School Location, Transmission Easement and Neighbourhood Centre zoned areas.

The Department of Planning, Industry and Environment partnered with Camden Council to identify the future zoning and development controls for the precinct. The draft ILP has been developed in consideration of all factors investigated throughout the precinct planning process, including:

- Aboriginal heritage
- European heritage
- land capability and contamination
- noise
- odour
- transport
- biodiversity
- water cycle management
- economics and employment
- community facilities and open space.

Pondicherry (the rezoning area) comprises a total area of 210 ha and is estimated to deliver an anticipated dwelling yield in the order of 2,500 dwellings. The resultant ILP will not avoid harm to Aboriginal objects across the study area. An Aboriginal heritage impact permit (AHIP) is required for any activity which will harm an Aboriginal object.

The degree of impact means that measures are required to mitigate harm to Aboriginal objects in the precinct. Measures for mitigating harm to Aboriginal objects are recommended for sites or areas with moderate archaeological or high cultural values. An AHIP would be required for mitigation activities.

In summary, the Aboriginal heritage assessment of the study area has shown that:

- Aboriginal heritage sites have been identified in a number of locations on various landforms within the study area. Sites recorded included open context artefact sites and PADs, consistent with predictions for the study area.
- Sites of Aboriginal objects were of moderate scientific/archaeological significance. Sites located in intact areas, generally raised areas outside of flood prone lands, retain archaeological integrity and have some research potential to further our understanding of past Aboriginal occupation and use of the study area and surrounds.
- Registered Aboriginal stakeholders have identified Pondicherry as a significant area: all sites have cultural value and are significant to the local Aboriginal community. The value of the study area is also linked to its connection to surrounding sites, landscapes and landforms within the local area.
- Specific cultural values identified through further Aboriginal cultural heritage assessment should be considered in future planning. The GANSW *Connecting with Country* draft framework and any finalised principles and frameworks should be considered as a practical guide for planners, architects, designers when considering the inclusion of Aboriginal cultural heritage values in the detailed design stage.
- All sites containing Aboriginal objects will be harmed by future development of the study area according to the ILP. An Aboriginal heritage impact permit (AHIP) issued by Heritage NSW under section 90(1) of the National Parks and Wildlife Act 1974 is required prior to any activity which may harm an Aboriginal object.

- Mitigation measures (salvage excavation) are required to mitigate harm to Aboriginal objects and the loss of value resulting from development of the precinct. Mitigation measures are recommended for those sites of moderate archaeological or high cultural value. An AHIP is required for mitigation activities.
- Consultation with registered Aboriginal stakeholders for the study area is ongoing. Consultation with registered Aboriginal stakeholders should continue in relation to future development activities within the study area. Consultation for seeking an AHIP should be undertaken in accordance with the requirements of Clause 60 of the National Parks and Wildlife Regulation 2019 and Heritage NSW Aboriginal cultural heritage consultation requirements for proponents 2010.

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## Appendix A

## Advertisement for registration of interest

**Public Notices****Notice for Registration of Interest**

Greenfields Development Company no. 2 Pty Limited on behalf of the Department of Planning & Environment and in partnership with Camden Council, is undertaking a Planning Proposal/DCP amendment process to rezone the lands known as 'Pondicherry', as an extension of the Oran Park Precinct within Oran Park NSW. Pondicherry is bounded by The Northern Road to the west, Oran Park Precinct to the south, South Creek to the east and private properties to the North.

Greenfields invites Aboriginal groups and/or Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in Oran Park NSW to register interest in a process of community consultation with the contact shown below (on behalf of Greenfields, as proposed applicant) regarding the proposed activity.

Information obtained from this consultation will inform the precinct planning process and may be used in the preparation of Aboriginal Heritage Impact Permit (AHIP) applications made under section 90A of the National Parks and Wildlife Act 1974. This will assist the Director General of the Office of Environment and Heritage in their consideration and determination of AHIP applications.

To register your interest in the consultation process, please contact:

Madeline Harding  
Kelleher Nightingale Consulting  
Level 10, 25 Bligh Street  
Sydney NSW 2000  
phone 9232 5373  
fax 9223 0680

The closing date for registration is 12 April 2017.

Placement details:

*Camden-Narellan Advertiser*, Wednesday, March 29 2017, p. 38

## Appendix B

## AHIMS Extensive Search Results

Office of  
Environment  
& HeritageAHIMS Web Services (AWS)  
Extensive search - Site list report

Your Ref/PO Number : 1632.1

Client Service ID : 314035

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	Site Features	Site Types	Reports
45-5-3357	OPD-3	AGD	56	289446	6235838	Open site	Destroyed	Artefact : 1		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Mr.Geordie Oakes,Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3113	
45-5-3358	OPD-5	AGD	56	289563	6236032	Open site	Destroyed	Artefact : 1		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Mr.Geordie Oakes,Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3113	
45-5-3363	OPR1	GDA	56	290329	6235896	Open site	Destroyed	Artefact : 11		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
45-5-3364	OPR2	GDA	56	289981	6235798	Open site	Destroyed	Artefact : 5		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
45-5-3365	OPR3	GDA	56	290741	6236089	Open site	Destroyed	Artefact : 3		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	2792,3106	
52-2-3541	OPR-4	AGD	56	290629	6235207	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>		
52-2-3543	OPR6	GDA	56	291141	6235342	Open site	Destroyed	Artefact : 5		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
45-5-3366	OPR8	GDA	56	291057	6235834	Open site	Destroyed	Artefact : 2		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
45-5-3367	OPR-9	AGD	56	291163	6236351	Open site	Valid	Artefact : 7		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3106	
45-5-3368	OPR10	GDA	56	290891	6235756	Open site	Destroyed	Artefact : 2		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
45-5-3369	OPR-11	AGD	56	291328	6236006	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3106	
45-5-3370	OPR-15	AGD	56	291821	6236286	Open site	Valid	Artefact : 193		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3106	
45-5-3371	OPR-16	AGD	56	292304	6236000	Open site	Valid	Artefact : 5		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3106	
52-2-3550	OPR-19	AGD	56	292405	6235177	Open site	Valid	Artefact : 3		102190
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML				<b>Permits</b>	3106	
52-2-3551	OPR20	GDA	56	292638	6235527	Open site	Destroyed	Artefact : 1		102190
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	
52-2-3554	OPR24	GDA	56	292182	6235414	Open site	Destroyed	Artefact : 2		
	<b>Contact</b>	T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti				<b>Permits</b>	3106	

Report generated by AHIMS Web Service on 22/11/2017 for Madeline Harding for the following area at Datum :GDA, Zone : 56, Eastings : 289450 - 293715, Northings : 6235284 - 6239101 with a Buffer of 0 meters. Additional Info : Archaeological Assessment Number of Aboriginal sites and Aboriginal objects found is 46

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### Extensive search - Site list report

Your Ref/PO Number : 1632.1

Client Service ID : 314035

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-3372	OPR-25	AGD	56	292153	6236395	Open site	Valid	Artefact : 12		
	<b>Contact</b> T Russell	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML							
45-5-4035	PAD 2038-6	GDA	56	290650	6236896	Open site	Valid	Potential Archaeological Deposit (PAD) :-	Permits 3106	
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams, Artefact - Cultural Heritage Management							
45-5-4038	Isolated Object 2041-5	GDA	56	292100	6238735	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4039	Artefact Scatter 2042-5	GDA	56	292227	6238721	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4040	Isolated Object 2043-5	GDA	56	292441	6238836	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4041	Artefact Scatter PAD 2044-46	GDA	56	292572	6238553	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4042	Isolated Object 2045-5	GDA	56	292571	6237172	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4043	Isolated Object 2046-5	GDA	56	292371	6237199	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4044	Isolated Object 2047-5	GDA	56	290809	6236164	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4045	Isolated Object 2048-5	GDA	56	290883	6236222	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4046	PAD 2049-6	GDA	56	291011	6236224	Open site	Valid	Potential Archaeological Deposit (PAD) :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							
45-5-4047	Artefact Scatter PAD 2051-46	GDA	56	292685	6236201	Open site	Partially Destroyed	Artefact :-, Potential Archaeological Deposit (PAD) :-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams, Kelleher Nightingale Consulting Pty Ltd							
45-5-4048	Artefact Scatter PAD 2052-46	GDA	56	292628	6235770	Open site	Partially Destroyed	Artefact :-, Potential Archaeological Deposit (PAD) :-	Permits 3955	
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams, Kelleher Nightingale Consulting Pty Ltd							

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Your Ref/PO Number : 1632.1

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-3848	Artefact Scatter PAD 2053-46	GDA	56	292639	6235653	Open site	Partially Destroyed	Artefact :-, Potential Archaeological Deposit (PAD):-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams, Kelleher Nightingale Consulting Pty Ltd							Permits 3955
45-5-4058	Artefact Scatter PAD 2065-6	GDA	56	291344	6236549	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD):-		
	<b>Contact</b>	<b>Recorders</b>	Extent Heritage Pty Ltd, Doctor Alan Williams							Permits
45-5-3541	NR3	GDA	56	289962	6235845	Open site	Destroyed	Artefact : 1		
	<b>Contact</b>	<b>Recorders</b>	Miss Melanie Thomson, Kelleher Nightingale Consulting Pty Ltd, Miss Kristen Taylor							Permits 3106
45-5-3542	Northern Road 4 (NR4)	GDA	56	290605	6237353	Open site	Valid	Artefact : 1		
	<b>Contact</b>	<b>Recorders</b>	Miss Melanie Thomson							Permits 3894
45-5-3543	Northern Road 5	GDA	56	290645	6237563	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD):-		
	<b>Contact</b>	<b>Recorders</b>	Doctor Alan Williams, Miss Melanie Thomson							Permits 3894
52-2-3930	CFPP-06	GDA	56	292625	6235380	Open site	Destroyed	Potential Archaeological Deposit (PAD): 1, Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Kelleher Nightingale Consulting Pty Ltd, Kelleher Nightingale Consulting Pty Ltd, Miss							Permits 3826
45-5-4139	TNRU3	GDA	56	290597	6237523	Open site	Valid	Artefact : 1		
	<b>Contact</b>	<b>Recorders</b>	Doctor Sandra Wallace, Artefact - Cultural Heritage Management							Permits 4103
45-5-4950	OPR-15 North	GDA	56	291937	6236747	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Kelleher Nightingale Consulting Pty Ltd, Ms. Cristany Milidich							Permits
45-5-3800	TNR-2	GDA	56	289817	6235744	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Ms. Andrea Ward, Mr. Josh Symons							Permits 3229, 3894
45-5-3766	OP1	GDA	56	292660	6236540	Open site	Valid	Artefact : 103, Potential Archaeological Deposit (PAD):-		
	<b>Contact</b>	<b>Recorders</b>	Doctor Alan Williams, AECOM Australia Pty Ltd (previously HLA-Envirosciences)							Permits
45-5-3767	OP2	GDA	56	290950	6236270	Open site	Valid	Artefact : 415		
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd (previously HLA-Envirosciences)							Permits
45-5-3768	OP3	GDA	56	292250	6236276	Open site	Valid	Artefact : 66		
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd (previously HLA-Envirosciences)							Permits
45-5-3769	OP Transect A	GDA	56	290840	6236310	Open site	Valid	Artefact : 1		
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd (previously HLA-Envirosciences)							Permits

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-3770	OP Transect B	GDA	56	291870	6235880	Open site	Valid	Artefact : 1		
	<u>Contact</u>									
	<u>Recorders</u>									
45-5-3771	OP Transect C	GDA	56	292550	6235480	Open site	Valid	Artefact : 1		
	<u>Contact</u>									
	<u>Recorders</u>									
45-5-3772	OP Transect D	GDA	56	292360	6236700	Open site	Valid	Artefact : 1		
	<u>Contact</u>									
	<u>Recorders</u>									
45-5-4909	MSC2	GDA	56	292264	6237219	Open site	Valid	Artefact :-		
	<u>Contact</u>									
	<u>Recorders</u>									

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## Appendix C Aboriginal Community Consultation Log

### PONDICHERRY REZONING: SOUTH WEST PRIORITY GROWTH AREA

### ORAN PARK, NSW

#### RECORD OF ABORIGINAL COMMUNITY CONSULTATION AND CONSULTATION LOG

*Aboriginal cultural heritage consultation requirements for proponents 2010 (Heritage NSW)*

The consultation process has been undertaken for the wider Pondicherry Precinct in accordance with the (former) DP&E's requirements outlined in the *Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres*. As the development of Pondicherry was considered likely to be the subject of AHIP applications made under section 90A of the *National Parks and Wildlife Act 1974*, consultation was also undertaken in accordance with the Heritage NSW consultation requirements.

Step	Task Requirement	Action	Outcome
4.1.1	Identify if native title exists in relation to the project area.	Conducted National Native TitleVision (NNTV) search on 31/03/2017.  Wrote to National Native Title Tribunal (NNTT) for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements (letter dated 9/03/2017).	NNTV search showed no registered native title claimants, native title holders and registered Indigenous Land Use Agreements in the project area (31/03/2017).  09/03/2017 NNTT: Advised no native title holders or registered Indigenous Land Use Agreements.
4.1.2	Ascertain, from reasonable sources of information, the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places.  Compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places	Wrote to various government agencies to obtain names and contact details of parties that may have an interest or hold cultural knowledge for the project area (letters dated 09/03/2017):  Camden Council (CC);  Greater Sydney Local Land Services (LLS).  The National Native Title Tribunal (NNTT) for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements;  Native Title Services Corporation (NTSCORP Limited);  Greater Sydney ROG, Office of Environment and Heritage (OEH);  The Registrar, <i>Aboriginal Land Rights Act 1983</i> for a list of Aboriginal owners (ORALRA); and  Tharawal Local Aboriginal Land Council (TLALC).	Responses received from:  14/03/2017 ORALRA: Advised that a search of the Register of Aboriginal Owners returned no results for the project area. Suggested contact TLALC for further assistance.  16/03/2017 OEH: Provided a list of Aboriginal stakeholders known to OEH that may have an interest in the project. Notes that consultation must be carried out before making an application for an AHIP and that consultation does not equal employment. Advises consultants must still advertise for interested parties.  09/03/2017: NNTT: Advised no native title holders or registered Indigenous Land Use Agreements. One existing claim is present in the Campbelltown LGA, NC2017/003 South Coast People, but this does not extend as far west as the project area.  23/03/2017 LLS: Advised that they are "not the primary source for contacting or managing contact lists for Aboriginal communities or persons that may inform or provide comment on planning issues. Suggested contacting the OEH Cultural Heritage Division.  28/03/2017 CC: Provided a list of contact details for Aboriginal groups identified for the CC LGA.



Step	Task Requirement	Action	Outcome
4.1.3	Written notification and advertisement:	Notification letters (dated 29/03/2017) and invitation to register interest sent to people and groups identified in step 4.1.2, including:	Responses for registration of interest from written notification and advertisement were received from:
4.1.3 contd.	<p>Write to the Aboriginal people whose names were obtained in step 4.1.2 and the relevant LALC(s) to notify them of the proposed project.</p> <p>Place a notice in the local newspaper circulating in the general location of the proposed project, explaining the project and its exact location.</p> <p>Notification by letter and newspaper must include:</p> <ul style="list-style-type: none"> <li>(a) the name and contact details of the proponent</li> <li>(b) a brief overview of the proposed project that may be the subject of an application for an AHIP, including the location of the proposed project</li> <li>(c) a statement that the purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director-General of OEH in his or her consideration and determination of the application</li> <li>(d) an invitation for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation with the proposed applicant regarding the proposed activity</li> <li>(e) a closing date for the registration of interests.</li> </ul>	<p>Badu Biamanga Bidjawong Aboriginal Corporation Bilinga Bilinga CHTS Butucarbin Aboriginal Corporation Corroboree Aboriginal Corporation Cubbitch Barta Cullendulla D'harawal Mens Aboriginal Corporation Darug Aboriginal Cultural Heritage Assessments Darug Custodian Aboriginal Corporation Darug Land Observations Darug Tribal Aboriginal Corporation Des Dyer Dharug Didge Ngunawal Clan DJMD Consultancy Garrara Aboriginal Corporation Ginninderra Aboriginal Corporation Goobah Gulaga Gundungurra Tribal Technical Services Gunjeewong Cultural Heritage Aboriginal Corporation Gunyu Gunyu CHTS Jerringong Kawul Cultural Services Merrigarn Indigenous Corporation Minnamunnung Munyunga Munyunga CHTS Muragadi Heritage Indigenous Corporation Murra Bidgee Mullangari Aboriginal Corporation Murramarang Murrumbul Murrumbul CHTS Mygunyah Camden Aboriginal Residents Group Nerrigundah Nundagurri Pemulwuy CHTS Peter Falk Consultancy Phil Khan (KYWG) Tharawal Aboriginal Corporation Tharawal LALC Thauaira Tocomwall</p>	<p>Tharawal Local Aboriginal Land Council</p> <p>Badu (via email 12/04/2017)</p> <p>Biamanga (via email 12/04/2017)</p> <p>Bidawal (via email 12/04/2017)</p> <p>Cubbitch Barta Native Title Claimants Aboriginal Corporation (via letter and phone call 13/04/2017)</p> <p>Cullendulla (via email 12/04/2017)</p> <p>Darug Aboriginal Cultural Heritage Assessments (early registration via phone 22/03/2017)</p> <p>Darug Custodian Aboriginal Corporation (as part of South West Growth Centre precinct consultation)</p> <p>Djiringanj (via email 12/04/2017)</p> <p>Darug Land Observations (via letter/ email 05/04/2017)</p> <p>Didge Ngunawal Clan (via email 29/03/2017)</p> <p>Darug Tribal Aboriginal Corporation (via phone 06/04/2017)</p> <p>Elouera (via email 12/04/2017)</p> <p>Eora (via email 12/04/2017)</p> <p>Gunjeewong Cultural heritage Aboriginal Corporation (via letter/ email 31/03/2017)</p> <p>Goobah (via email 12/04/2017)</p> <p>Gulaga (via email 12/04/2017)</p> <p>Kuringgai (via email 13/04/2017)</p> <p>KYWG (via letter 30/03/2017)</p> <p>Murra Bidgee Mullangari Aboriginal Corporation (via letter/ email 31/03/2017)</p> <p>Meroo (via email 12/04/2017)</p>

Step	Task Requirement	Action	Outcome
4.1.3 contd.		<p>Walbunja Walgalu Warragil Cultural Services Wingikara Wingikara CHTS Wullung Wurrumay Yerramurra</p> <p>Advertisement inviting people to register interest in consultation published in the <i>Camden-Narellan Advertiser</i> on 29/03/2017. Advertisement attached as Appendix A.</p> <p>Closing date for registration of interest was 12/04/2017.</p>	<p>Muragadi Heritage Indigenous Corporation (via letter/ email 31/03/2017)</p> <p>Minnamunnung (via email 12/04/2017)</p> <p>Murramarang (via email 12/04/2017)</p> <p>Murrin (via email 12/04/2017)</p> <p>Nerrigundah (via email 10/04/2014)</p> <p>Ngarigo (via email 13/04/2017)</p> <p>Ngunawal (via email 13/04/2017)</p> <p>Nundagurri (via email 12/04/2017)</p> <p>Tharawal (via email 13/04/2017)</p> <p>Walbunja (via email 12/04/2017) Walgalu (via email 13/04/2017)</p> <p>Yerramurra (via email 12/04/2017)</p> <p>*one additional stakeholder registered via email but chose to withhold their details in accordance with Step 4.1.5</p>
4.1.4	A minimum of 14 days from the date the letter was sent or notice published in the newspaper to register an interest.	Closing date for registration of interest (12/04/2017) included in the notification letters and notice in the newspaper was at least 14 days from the date the letters were sent and notice appeared in the newspaper.	Copy of notification letters and newspaper advertisement attached.
4.1.5	Must advise Aboriginal people who are registering an interest that their details will be forwarded to OEH and the LALC unless they specify that they do not want their details released.	<p>Groups informed by letters (dated 29/03/2017) or verbally over the phone if they registered by phone.</p> <p>One registered Aboriginal stakeholder group/individual specified that they did not want their details to be released.</p>	One registered Aboriginal stakeholder group/individual specified that they did not want their details to be released.
4.1.6	Make a record of the names of each Aboriginal person who registered an interest. Provide a copy of that record and copy of the notification from step 4.1.3 to the relevant OEH EPRG regional office and LALC	<p>List of registered stakeholders compiled.</p> <p>One registered Aboriginal stakeholder group/individual specified that they did not want their details to be released.</p>	<p>Letters sent to OEH and Tharawal LALC with list of registered Aboriginal stakeholders (letters dated 24/04/2017).</p> <p>One registered Aboriginal stakeholder group/individual specified that they did not want their details to be released.</p>
4.1.7	LALCs holding cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area who	Tharawal LALC registered interest to be involved in consultation.	Tharawal LALC registered interest as an organisation. Provided contact details for the LALC and the name of a LALC representative to act as contact person (Rebecca Ede, CEO).

Step	Task Requirement	Action	Outcome
	wish to register an interest to be involved in consultation must register their interest as an Aboriginal organisation rather than individuals.		
4.1.8	<p>Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated.</p> <p>Aboriginal cultural knowledge holders who have registered an interest may indicate they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf.</p>	<p>Responses received from organisations and individuals registering interest in the project.</p> <p>Contact details and names of representatives were also provided.</p>	<p>Aboriginal stakeholders have registered as an organisation name or as individuals.</p> <p>Contact details and names of representatives for the organisations were provided and confirmed during the registration of interest process.</p>
4.2	Presentation of information about the proposed project	<p>Information regarding the proposed project provided throughout the consultation process including letters sent on 29/03/2017. Further project update information provided in letters sent 19/06/2017 (see entry below).</p> <p>Informal discussions also held during the registration of interest period.</p>	No responses to the provision of project information.
4.3.1-4.3.2	Notification of proposed assessment methodology	<p>Copy of the proposed assessment methodology sent to all registered stakeholders with an invitation to provide comment (letters dated 19/06/2017).</p> <p>Stakeholders were provided a copy of the proposed test excavation methodology and encouraged to provide feedback or comment. A 28 day review period was provided.</p> <p>Stakeholders were also provided with copies of the draft Step 1 and draft Step 2 Pondicherry Release Land Rezoning report (review packages dated 19/06/2017 and 27/09/2017) and encouraged to provide comment, including any protocols regarding the gathering of information and any matters such as issues/areas of cultural significance that might affect, inform or refine these.</p>	<p>Formal responses were received from the following stakeholder groups: Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC), Darug Custodians Aboriginal Corporation (DCAC), Darug Land Observations (DLO), Didge Ngunnawal Clan (DNC), Gunjeewong Cultural heritage Aboriginal Corporation (GCHAC), Gulaga, Kamilaroi Yunkuntjatjara Working Group (KYWG), Murra Bidgee Mullungari Aboriginal Corporation (MBMAC) and Muragadi.</p> <p>DCAC (letters dated 19 June 2017 &amp; 28 September 2017) noted that:</p> <p>This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site, there is a complex of significant sites.</p>

Step	Task Requirement	Action	Outcome
4.3.1- 4.3.2 Contd.		All registered stakeholders were also provided with an invitation to provide input and comment on site details, specifically information on cultural values of Aboriginal sites, objects or places in the study area for the development of significance assessment and ranking consideration in the next steps of the process.	<p>Landscapes and landforms are significant to us for the information that they hold and the connection to Darug people. Aboriginal people (Darug) had a complex lifestyle that was based on respect and belonging to the land, all aspects of life and survival did not impact on the land but helped to care for and conserve land and the sustenance that the land provided.</p> <p>As Darug people moved through the land there were no impacts left, although there was evidence of movement and lifestyle, the people moved through areas with knowledge of their areas and followed signs that were left in the landscape. Darug people knew which areas were not to be entered and respected the areas that were sacred.</p> <p>Knowledge of culture, lifestyle and lore have been part of Darug people's lives for thousands of years, this was passed down to the next generations and this started with birth and continued for a lifetime. Darug people spent a lifetime learning and as people grew older they passed through stages of knowledge, elders became elders with the learning of stages of knowledge not by their age, being an elder is part of the kinship system this was a very complicated system based on respect.</p> <p>DCAC also indicated that they had reviewed the draft Step 1 report and draft Step 2 report and supported the recommendations set out in these reports.</p> <p>KYWG (letter dated 10 July 2017) expressed that the whole area in general was highly significant to Aboriginal people and that camping areas have been present in this area for over thousands of years.</p> <p>KYWG also expressed that there was potential for burial grounds in the local area. They expressed satisfaction with the report and the importance of searching for Aboriginal heritage in the study area.</p>



Step	Task Requirement	Action	Outcome
4.3.1- 4.3.2 Contd			<p>CBNTCAC (letter dated 19 October 2017) provided specific comments on the draft Step 2 report. CBNTCAC is highly familiar with the study area and has been involved in all relevant previous Aboriginal heritage investigations.</p> <p>CBNTCAC noted that a number of sites listed in the AHIMS extensive search results table have since been excavated or destroyed under existing AHIPs for surrounding development areas, and that their inclusion in the table may suggest that they were still extant, when this was no longer the case. CBNTCAC also expressed that the destruction of these sites increased the significance of remaining sites due to their increasing rarity in the region. CBNTCAC also clarified that artefact scatters associated with the chief drainage lines were likely to extend into the areas currently covered by dams and that this should be taken into account when assessing archaeological potential, as artefacts have previously been recorded in these areas when water levels were lower (e.g. OPR-15 North).</p> <p>Responses received from Aboriginal stakeholders including: DLO (letter dated 23 June 2017), DNC (email dated 21 June 2017), GCHAC (letter dated 22 June 2017), Gulaga (email dated 20 June 2017), MBMAC (letter dated 22 June 2017) and Muragadi (letter dated 21 June 2017).</p> <p>In general, these stakeholders expressed their support of the draft Step 1 and draft Step 2 reports and the proposed methodologies for the Pondicherry project. There was also interest expressed in continued consultation and involvement in the project throughout the assessment process.</p>
4.3.3	Gathering information about cultural significance	Aboriginal stakeholders invited to provide information about cultural significance of the area (letters dated 9/03/2017, 29/03/2017, 19/06/2017, 27/09/2017 and 8/11/2019). Previous comments and involvement was recognised and additional comments sought.	Throughout the assessment process, cultural knowledge regarding the Aboriginal cultural/social values of the study area and identified archaeological sites was sought from registered stakeholders. Previous assessments including cultural values have been revisited and sought to confirm with the Aboriginal community.

Step	Task Requirement	Action	Outcome
4.3.3 Contd.		Stakeholders also invited to attend fieldwork (test excavation) for the project.	Stakeholder representatives were invited to participate in the test excavation program.
	Project Updates	Project updates were provided to stakeholders (letters dated 22/11/2018 and 21/05/2019) outlining the next steps of the assessment process and progression of the project.	Responses were received from three stakeholder groups: KYWG (via email 23/11/2018 and 31/05/2019), MBMAC (via email 26/11/2018 and 27/05/2019) and MHIC (via email 05/12/2018 and 31/05/2019) acknowledging the project update information provided.
	Step 3 Send Out	<p>Copy of the final draft Step 3 report sent to all registered stakeholders with an invitation to review and make recommendations for land use and management of Aboriginal heritage developed during Step 3 of the rezoning assessment process and review of the draft ILP (development layout)</p> <p>Stakeholders were invited to provide information and feedback on the report and any cultural information for inclusion (letter dated 08/11/2019).</p> <p>A 28 day review period was provided, ending on 06/12/2019.</p>	<p>DCAC (letter dated 12 November 2019) expressed that Aboriginal archaeological sites exist as a complex and are not all separate sites. They recommended that the connections between sites be interpreted throughout the project. They also expressed the high importance of information gained from the sites and recommended community surface collection as well as salvage excavation. With exception of the large number of groups consulted on the project, they supported the draft Step 3 report.</p> <p>CBNTCAC (letter dated 21 November 2019) reiterated concerns regarding the inundated archaeological site and conservation outcomes which did not avoid Aboriginal archaeological sites, suggesting that 'once these sites are gone, they are gone forever'. CBNTCAC stated that if an AHIP application is submitted for all seven sites, then they should all be subject to salvage mitigation and that some form of compensation to the Aboriginal community should be considered. CBNTCAC also stressed the importance of 'listening to those who have the right to speak for this Country, and the knowledge'.</p>
	Project Update	A project update was provided to stakeholders (letters dated 08/05/2020) outlining the next steps of the assessment process and progression of the project.	Responses were received from two stakeholder groups: Goobah (via email 26/05/2020) and KYWG (via email 13/05/2020) acknowledging the project update information provided and a desire to continue to be kept informed regarding the project.