

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT



[Excavations within the Prestons Creek Bank site]

**LOT 20 DP1173483 AND
LOTS 33, 34, 35 AND 43 DP2359
YARRUNGA STREET, PRESTONS**

LIVERPOOL LGA

Mary Dallas Consulting Archaeologists

December 2015

Prepared to Logos Investment Management Pty Ltd



Executive Summary

This Aboriginal cultural heritage assessment report documents archaeological investigations recently undertaken by MDCA [Mary Dallas Consulting Archaeologists] on behalf of Logos Investment Management Pty Ltd, in relation to two areas of Aboriginal archaeological sensitivity within five parcels of land known as Lot 20 DP1173483 and Lots 33, 34, 35 and 43 DP2359 at Yarrunga Street, Prestons. The investigations were undertaken to inform a proposal to develop the subject land as the Prestons Warehouse and Distribution Estate, and specifically to address the Secretary's Environmental Assessment Requirements issued for the proposal as a State Significant Development.

The investigations involved field inspection and archaeological test excavations in accordance with the Office of Environment & Heritage (OEH) 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. As per the Code of Practice, the investigations were preceded by Aboriginal community consultation in accordance with the requirements outlined in subclause 80C(1) - 80C(6) of the *National Parks and Wildlife Regulation 2009*.

The archaeological test excavations took place across two areas of assessed Aboriginal archaeological sensitivity within the subject land, and involved the manual excavation of 137 test pits along a series of transects sampling the varied topography of the areas of sensitivity. A total of 194 pieces of worked stone were retrieved from 34 test pits. The majority of these stone pieces were retrieved from a small number of pits on the western side of the minor tributary of Maxwells Creek within the eastern portion of the subject land. This has been defined as the Prestons Creek Bank site, and is proposed to be managed by preservation within a recreational area within the proposed subdivision. It is proposed that the artefacts retrieved from the current excavations be reburied in this area, and that interpretive signage be erected to educate visitors about the past Aboriginal use of the area and the later Benera Homestead (as discussed in the MDCA 2015 report on the investigation of the homestead).

The remainder of the subject land was found to be moderately to heavily disturbed by historical land use, with discontinuous and low densities of stone artefacts occurring often in conjunction with evidence of historical disturbance. Given the preservation of undoubtedly the most significant archaeological remains of the Aboriginal use of the subject land within the Prestons Creek Bank site, and the disturbed and sparse nature of the archaeological remains outside this area, it is considered appropriate that development approval be given to impact all portions of the subject land outside the defined extent of the Prestons Creek Bank site.

On this basis, there is considered to be no requirement for further archaeological investigations within the subject land in relation to the current proposal. It is recommended though that a condition of consent be the preparation of an Aboriginal Heritage Management Plan for the Prestons Creek Bank site, including cross-referenced recommendations in the Landscape Plan, inclusive of an interpretive display, at Construction Certificate stage.



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1.0 Project Overview

1.1 Introduction

This Aboriginal Cultural Heritage Assessment report has been prepared by MDCA [Mary Dallas Consulting Archaeologists] for Logos Investment Management Pty Ltd. It has been prepared to inform a State Significant Development application for the industrial subdivision of Lot 20 DP1173483 and Lots 33, 34, 35 and 43 DP2359 at Yarrunga Street, Prestons as the Prestons Warehouse and Distribution Estate (**Figure 1**). Projects assessed as State Significant Developments do not require approval under s90 of the National Parks & Wildlife Act 1974 to impact Aboriginal heritage, but are instead guided by the preparation of an Environmental Impact Statement that addresses the Secretary's Environmental Assessment Requirements (SEARs) for each particular project. The SEARS refer however to the same guiding documents as required for projects approved outside of State Significant Development provisions, and hence reporting and assessment takes an overall similar form. In relation to the current proposal, the SEARS require the application to:

- identify, describe and document the Aboriginal Cultural Heritage Values that exist across the whole area that will be affected by the proposal in accordance with current OEH guidelines.
- undertake and document Aboriginal community consultation in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks & Wildlife Act 1974* (DECCW 2010a), to investigate the significance of cultural heritage values for Aboriginal people who have a cultural association with the land.
- assess and document potential impacts to Aboriginal cultural heritage values from the current proposal and, where avoiding impacts is not possible, outlined proposed measures to mitigate impacts.

The report documents the Aboriginal archaeological assessment and archaeological test excavations undertaken in accordance with the Office of Environment & Heritage (OEH) 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b; hereafter 'the Code') to address the SEARS in relation to the current proposal. It is in the form of an Aboriginal Cultural Heritage Assessment report, as referred to in the Code and the *National Parks and Wildlife Regulation 2009* (NPW Regulation), and details final management recommendations in relation to the development proposal. MDCA has also undertaken historical archaeological investigations of the heritage listed Benara Homestead Site within the subject land concurrently with the Aboriginal archaeological investigations. These are fully documented in a separate report (MDCA 2015), but are discussed where relevant in the current report.



The current report contains the following:

- A description of the subject land and project (**Section 1**)
- A discussion of the Aboriginal community consultation undertaken (**Section 2** and **Appendix 1**)
- A consideration of relevant landscape context (**Section 3**) and archaeological context (**Section 4**)
- A description of archaeological test excavation aims, methods and results (**Section 5**)
- Analysis and discussion of the results of the investigation and the assessed significance of the Aboriginal archaeological remains documented (**Section 6**)
- A description of the proposed Aboriginal heritage management strategy (**Section 7**)
- A set of management recommendations (**Section 8**)
- References used in the current report (**Section 9**)
- Archaeological excavation records (**Appendix 2**)
- AHIMS Register search records and relevant site records (**Appendix 3**)

1.2 Report Authorship and Study Participants

This report has been prepared by MDCA Principal Consultant Paul Irish and MDCA Archaeologist Tamika Goward, with stone artefact analysis by Emeritus Professor Richard Wright (MDCA associate). Survey data was provided by Guy Hazell (Archaeological Surveying and Illustration). Participants in the Aboriginal archaeological test excavations are listed in **Table 10**.

1.3 Site Identification

The subject land is known as Lot 20 in DP1173483 and Lots 33, 34, 35 and 43 in DP2359, and is situated south of Yarrunga Street, west of Bernera Road, and north of Kurrajong Road at Prestons, near Liverpool in south-western Sydney (**Figures 1 & 2**). Together, these five allotments comprise approximately 20.3 hectares of land situated along a low, rounded ridge forming the watershed between Cabramatta Creek to the west and a tributary of Maxwells Creek to the east, to which it extends to and contains a portion of. The land is bounded to the north by Yarrunga Street, to the east by Bernera Road, to the south by Kurrajong Road and to the west by other rural residential allotments.

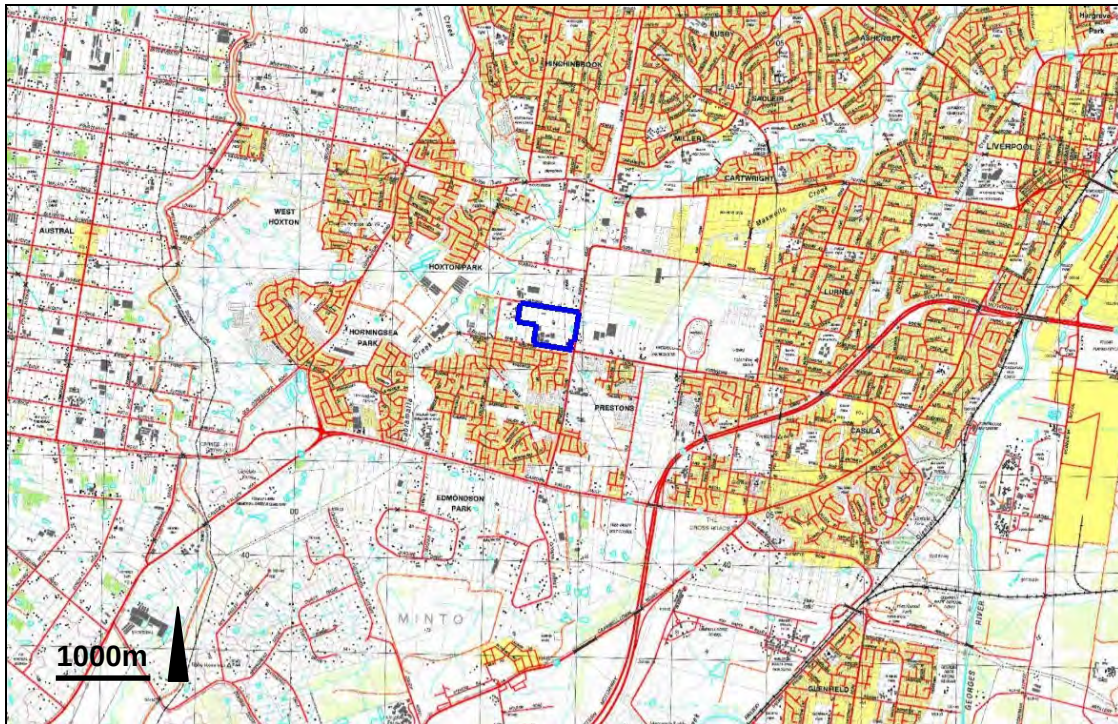


Figure 1. The subject land (blue outline) in its regional context.

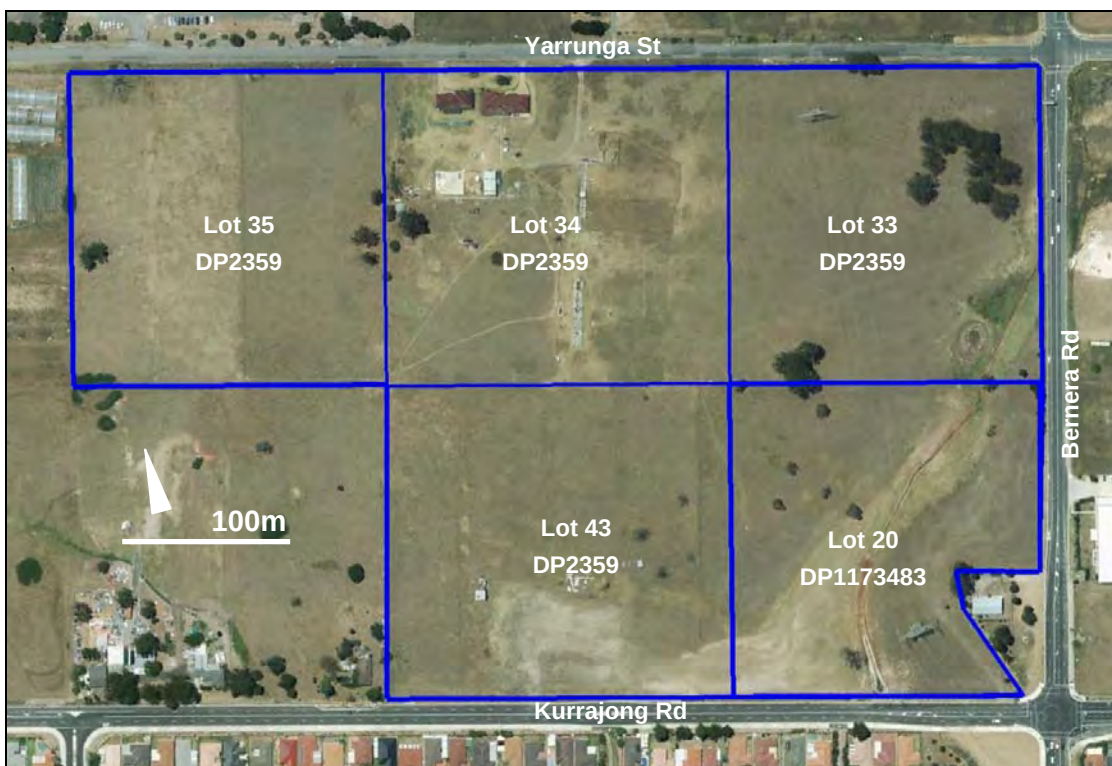


Figure 2. Aerial view of the subject land and component allotments.



The subject land includes a small, elevated knoll on the northern end of the ridge, upon which the historic Benera Homestead was located from the 1850s until 1986, when it was destroyed by fire. This knoll forms the highest point in the surrounding landscape, with views that extend a considerable distance beyond the adjacent creek catchments to the lower Blue Mountains in the west and as far as Holsworthy and the Royal National Park to the south-east. To the north of the knoll are two modern brick homes and associated sheds along Yarrunga Street, while to the east and south-east are the remains of former feedlots, horse yards, former market gardens and high voltage transmission lines. To the south of the knoll along Kurrajong Road is the site of several recently demolished structures.

1.4 Reason for the Current Study

1.4.1 Proposed Development

The subject land is currently zoned to allow industrial subdivision, and Logos Investment Management Pty Ltd propose to construct a warehouse and distribution complex known as Prestons Warehouse and Distribution Estate within the subject land. This development is proposed to be assessed as at State Significant Development (SSD) as defined under Part 4, Division 4.1 s89C of the *Environmental Planning and Assessment Act 1979*. Accordingly, an application was made by the proponent in August 2015 to the NSW Planning & Environment for the issue of Secretary's Environmental Assessment Requirements (SEARs) for the Environmental Impact Statement (EIS) to be prepared for the proposal. The SEARs were issued in 11 September 2015 with the Aboriginal heritage requirements as outlined in **Section 1.1** above.

The current proposal is to construct five large warehouses within the subject land, each comprising loading docks, a depot, office space and car parking. A proposed layout plan is shown in **Figure 3**. The three largest warehouses are proposed to be more than 20,000sqm in size, and therefore require major reshaping of the current contours of the subject land through bulk cut and fill earthworks. In addition service infrastructure, internal roadways and final landscaping will be required. Given that the subject land comprises residual soils in which archaeological deposits are likely to be confined to the uppermost soil horizons (see **Section 3.1**), it could be expected that any Aboriginal archaeological remains or archaeological deposit present in areas proposed for bulk earthworks and construction will be impacted by the current proposal. For this reason, the current investigations have aimed to determine the presence/absence, extent and significance of any Aboriginal archaeological remains across the subject land as the basis for formulating an appropriate management strategy in relation to the current proposal.



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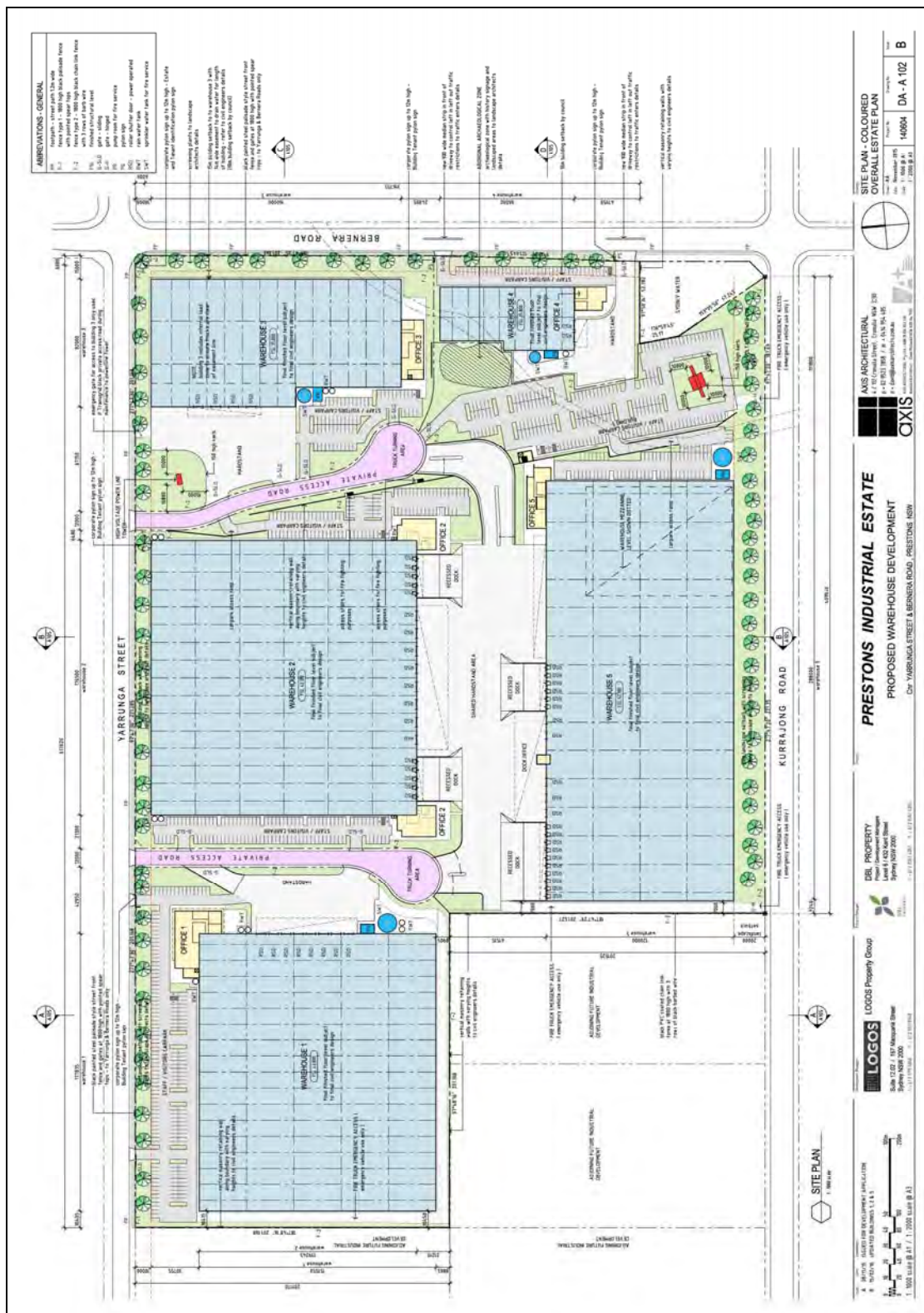


Figure 3. Proposed layout of the Prestons Warehouse and Distribution Estate.



The current study was initially commissioned as Preliminary Aboriginal Heritage advice prior to the purchase of the subject land by the proponents. On the basis of this advice, the results of which are discussed and incorporated into the current report, MDCA was engaged by the proponent to undertake archaeological test excavations and Aboriginal community consultation in accordance with current legislation and policy, specifically the OEH Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), and *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks & Wildlife Act 1974* (DECCW 2010a),

1.4.2 Legislative & Policy Requirements

The *National Parks & Wildlife Act* (1974) (**NPW Act**), administered by the Office of Environment & Heritage (OEH), provides statutory protection for all Aboriginal 'objects' and 'places' where 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" [Section 5(1)]

An Aboriginal place must be declared under Section 84 of the NPW Act and be a place that:

"in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture, to be an Aboriginal place for the purposes of this Act." [Section 84].

Amendments to the NPW Act in 2010 have retained an offence to knowingly *harm* an Aboriginal object [s86(1)], but have greatly increased penalties for such offences. The amendments have also introduced a strict liability offence for any *harm* (i.e. knowingly or unknowingly) to Aboriginal objects [s86(2)] or Aboriginal places [s86(4)], subject to certain defences [s87] (including if an AHIP has been obtained under Section 90 of the NPW Act) as well as exemptions [s87A].

Harm to an object or place is defined to include:

"any act or omission that:

(a) destroys, defaces or damages the object or place, or

(b) in relation to an object—moves the object from the land on which it had been situated,
or

(c) is specified by the regulations, or



(d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c);

but does not include any act or omission that:

(e) desecrates the object or place, or

(f) is trivial or negligible, or

(g) is excluded from this definition by the regulations.”[Section 5(1), NPW Act]

It is a defence to the strict liability offence of harm to an Aboriginal object under s86(2) if Due Diligence was exercised which reasonably determined that the proposed activity would not harm an Aboriginal object [S87(2)]. Due Diligence assessment can take a number of forms, including following a process developed by the OEH (as described in DECCW 2010c) or one of an equivalent standard. The current Aboriginal Cultural Heritage Assessment report is considered more than sufficient to meet these requirements. Another defence is also provided for ‘low impact activities’ [s87(4), NPW Act and cl 80B NPW Regulation].

Impacts to Aboriginal objects generally require an **Aboriginal Heritage Impact Permit (AHIP)**. Applications for these permits must be accompanied by an **Aboriginal Cultural Heritage Assessment** report. An exception is the undertaking of archaeological test excavations, which in certain circumstances can be undertaken without an AHIP provided such works are undertaken in full compliance with the 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b).

Requirement 15A of the Code states that excavations undertaken following the Code must be preceded by Aboriginal community consultation up to the stage described in sub clause 80C(6) of the NPW Regulation (and detailed further in DECCW 2010a). Specifically, this involves placing a public advertisement to seek expressions of interest in the project as well as directly notifying Local Aboriginal Land Councils and government agencies dealing with Aboriginal communities in the area. People or organisations registering as “Registered Aboriginal Parties” must be provided with an opportunity to review and comment on the proposed project methodology and to identify whether they are aware of any objects or places of cultural value to Aboriginal people in the subject land, and to provide information on these objects or places. OEH must also be provided with an excavation methodology, and other technical information prior to the commencement of excavations under the Code. These requirements were complied with by MDCA in carrying out the archaeological investigation works.

The way in which Aboriginal heritage is managed with respect to proposed development impacts is set out in the provisions of the *Environmental Planning & Assessment Act 1979* (the **EP&A Act**). The EP&A Act has three main parts of direct relevance to Aboriginal cultural



heritage. Namely, Part III which governs the preparation of planning instruments, Part IV which relates to development assessment process for local government (consent) authorities and Part V which relates to activity approvals by governing (determining) authorities (and is of less relevance to the current study).

Part IV is of most relevance to the current project, and deals with the process of obtaining development consent from local government authorities, including the requirement for documentation of an assessment of potential development impacts in certain cases. It also describes the process for *integrated development* (Division 5) which are those development proposals requiring a permit or consent from a state government authority (for example the OEH in relation to Aboriginal heritage). Under Part 4 (Division 4.1) of the EP&A Act, projects can be deemed to be of State Significance. In these cases, the Department of Planning & Infrastructure takes over the role of the determining authority from Council. Importantly, projects assessed as State Significant Developments (SSD) do not require Aboriginal heritage impact approvals under the NPW Act but do require a process of investigation broadly parallel to that under the Act, as generally set out in the Secretary's Environmental Assessment Requirements (SEARs) for each SSD project.

In summary, the implications of the provisions of the NPW Act and EP&A Act for the current project are as follows:

- As a State Significant Development, an investigation of Aboriginal cultural heritage values must be undertaken to inform the Environmental Impact Assessment of the proposal.
- While impacts to Aboriginal objects in the context of State Significant Developments do not require approval under s90 of the NPW Act, similar processes of archaeological assessment and Aboriginal community consultation are required to be undertaken and documented, and impacts to Aboriginal objects should be avoided where possible.

1.5 Methods Used

This report documents the Aboriginal heritage assessment of the subject land and proposed impacts, in accordance with the issued SEARs and the OEH guidelines (DECCW 2010a & b) to which they refer. The assessment must include full documentation of a prescribed process of Aboriginal community consultation in accordance with these guidelines. It is noted that although the works documented in the current report were commenced prior to the issuing of the State Significant Development SEARs, the processes undertaken have been consistent with the SEARs, as they have been based on the same underlying guidelines and policy requirements.



2.0

Aboriginal Cultural Assessment

Consultation with the local Aboriginal community was undertaken in order to document the Aboriginal cultural significance of the subject land. The project was initiated prior to the current proposal being proposed as a State Significant Development, but as it was considered possible that Aboriginal archaeological remains may be present within the subject land, this consultation was undertaken in accordance with the requirements of the *National Parks and Wildlife Regulation 2009* (s80C) [‘the Regulation’]. This was considered appropriate whether or not the project was accepted to be assessed as a State Significant Development, as consultation under s80C of the Regulation is a requirement of both State Significant Development projects and those requiring Aboriginal Heritage Impact Permits under the NPW Act.

This section documents the Aboriginal community consultation undertaken in relation to the current proposal. Initially this involved formulating a list of Registered Aboriginal Parties to be consulted about the project.

2.1 Aboriginal Community Consultation

2.1.1 Public and Direct Notices

For the purposes of the initial Aboriginal heritage advice provided to the proponent in April 2015 in relation to their possible purchase of the subject land, consultation was undertaken with both the Gandangara Local Aboriginal Land Council (GLALC) and Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC) to provide an Aboriginal community perspective on the assessment, particularly in relation to any cultural/historical associations with the subject land. The GLALC has a statutory responsibility “to promote the protection of Aboriginal culture and the heritage of Aboriginal persons”¹ within its boundaries, which includes the current subject land. The CBNTCAC represent registered Native Title claimants with an interest in the Prestons area. At the time of this initial advice, the GLALC was unavailable to participate in a field inspection of the subject land, however CBNTCAC representative Glenda Chalker participated in a site inspection on 16th April 2015 and provided some initial advice on both the site inspection as well as any cultural/historical associations with the area considered pertinent to the initial assessment (see below).

When MDCA was engaged by the proponent to undertake further Aboriginal heritage investigations, Aboriginal community consultation was undertaken in accordance with the

¹ Aboriginal Land Rights Act 1983, s52(1)(m).



requirements of s80C of the Regulation. Neither these requirements, nor OEH policy (DECCW 2010a) prescribe the automatic registration of Registered Native Title Claimants or Local Aboriginal Land Councils despite legislative recognition of their cultural heritage responsibilities and associations respectively. However, in recognition of these, and due to their prior involvement in the initial appraisal of the subject land, both the GLALC and CBNTCAC were notified of their automatic listing as Registered Aboriginal Parties for the project via letter on 27/5/15, but were provided with an opt out in the event that they did not wish to have further involvement in the project.

A public notice seeking registrations of interest in the project was lodged in the Liverpool Leader on 13/5/2015 giving a date of 27/5/2015 for responses (**Appendix 1A**). Darug Aboriginal Cultural Heritage Assessments responded to the notice in the Liverpool Leader and expressed their interest in registration via phone conversation on 22/5/2015. They were Registered but requested to provide an expression of interest in writing, which was subsequently provided.

At the same time (12/5/2015) direct notices were sent to the agencies listed below (**Table 1**) to seek details of potential further Aboriginal parties to contact in relation to registrations of interest (see sample in **Appendix 1A**). The responses received (**Appendix 1A**) led to follow-up letters being sent to the organisations listed in **Table 2**, enquiring whether they wanted to register an interest in the project (see sample in **Appendix 1A**).

Table 1. Direct Agency Notices sent 12/4/2015.

Agency	Response Deadline	Response Received?	Additional Contacts to those already Registered
Greater Sydney Local Land Services	27/5/2015	19/5/2015	Email declaring that the LLS has no interest in this project, and will pass the letter on to the members of their Aboriginal Advisory Committee.
National Native Title Tribunal	27/5/2015	18/5/2015	No relevant claims noted.
NTS Corp	27/5/2015	15/5/2015	NTS Corp privacy policy restricts them from providing contact details but notified that the information would be passed on to any individual, group or organisation whom they are aware holds cultural knowledge or asserts traditional interest in the area.
Liverpool City Council	27/5/2015	28/5/2015	Liverpool City Council's Aboriginal Consultative Committee, Gandangara Local Aboriginal Land Council, Tharawal Local Aboriginal Land Council, Deerubbbin Local Aboriginal Land Council. NOTE: the last two groups do not apply to the current project as the subject land is outside of their administrative boundaries.



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Agency	Response Deadline	Response Received?	Additional Contacts to those already Registered
Office of Environment & Heritage	27/5/2015	20/5/2015	Gandangara LALC, Tocomwall Pty Ltd, Darug Custodian Aboriginal Corp, Darug Tribal Aboriginal Corp, Darug Land Observations Pty Ltd, Des Dyer, Warragil Cultural Services, Wurrumay Cultural Service, Badu, Guyuu, Rebecca Chalker, Cubbitch Barta, Walbunja, Darug Aboriginal Cultural Heritage Assessments, Goobah Developments, Wullung, Yerramarra, Nundagurri, Balinga, Munyunga, Jerringong, Wingikara, Murrumbul, Pemulwuy CHTS, Phil Khan.
NSW Department of Aboriginal Affairs/ Registrar of Aboriginal Owners	27/5/2015	13/5/2015	No Registered Aboriginal Owners noted.
Gandangara LALC	27/5/2015		No response.

Table 2. Direct Community Notices.

Community group	Date of Letter	Response Deadline	Response Received?	Seeking Registration?
Darug Custodian Aboriginal Corp	27/5/2015	11/6/2015	11/6/2015	Yes
Badu	27/5/2015	11/6/2015	27/5/2015	Yes
Tocomwall Pty Ltd	27/5/2015	11/6/2015		
Darug Tribal Aboriginal Corp	27/5/2015	11/6/2015		
Rebecca Chalker	27/5/2015	11/6/2015		
Des Dyer	27/5/2015	11/6/2015		
Wullung	27/5/2015	11/6/2015		
Warragil Cultural Services	27/5/2015	11/6/2015		
Wingikara	27/5/2015	11/6/2015	27/5/2015	Yes
Jerringong	27/5/2015	11/6/2015		
Pemulwuy CHTS	27/5/2015	11/6/2015		
Balinga	27/5/2015	11/6/2015	27/5/2015	Yes
Wurrumay Cultural Service	27/5/2015	11/6/2015		
Darug Land Observations Pty Ltd	27/5/2015	11/6/2015		
Goobah Developments	27/5/2015	11/6/2015	15/6/2015	Yes
Yerramarra	27/5/2015	11/6/2015	27/5/2015	Yes
Walbunja	27/5/2015	11/6/2015	28/5/2015	Yes
Gunnyuu	27/5/2015	11/6/2015	27/5/2015	Yes
Phil Khan	27/5/2015	11/6/2015	29/5/2015	Yes
Nundagurri	27/5/2015	11/6/2015	27/5/2015	Yes
Munyunga	27/5/2015	11/6/2015	27/5/2015	Yes
Murrumbul	27/5/2015	11/6/2015	27/5/2015	Yes
Liverpool City Council's Aboriginal Consultative Committee	29/5/2015	NA	29/5/2015	Yes



Several groups were also indirectly contacted via one of the above agencies, and subsequently contacted MDCA. These responses did not detail which agency was responsible for their notification but each group expressed their interest in registration as listed below.

Table 3. Indirect Community Notices.

Community group	Response Received?	Seeking Registration?
Ngarigo	28/5/2015	Yes
Walgalu	31/5/2015	Yes
Dharug	31/5/2015	Yes
Tharawal	31/5/2015	Yes
Eora	27/5/2015	Yes
Wandandian	27/5/2015	Yes
Ngunawal	27/5/2015	Yes
Gangangarra	27/5/2015	Yes
Elouera	4/6/2013	Yes

2.1.1 Registered Aboriginal Parties

On the basis of the notification process above, the following Aboriginal organisations were listed as Registered Aboriginal Parties and details of these organisations were sent to the OEH and Gandangara LALC as required by the *Regulation* (80C[5b]) on 15th June 2015.

Table 4. Registered Aboriginal Parties.

Name	Abbreviation Used in this Report
Gandangara LALC	GLALC
Cubbitch Barta Native Title Claimants Aboriginal Corporation	CBNTCAC
Darug Aboriginal Cultural Heritage Assessments	DACHA
Balinga	Balinga
Gunyyuu	Gunyyuu
Munyunga	Munyunga
Murrumbul	Murrumbul
Wingikara	Wingikara
Walbunja	Walbunja
Ngarigo	Ngarigo
Walgalu	Walgalu
Dharug	Dharug
Tharawal	Tharawal
Liverpool City Council's Aboriginal Consultative Committee	Council's Aboriginal Committee



Name	Abbreviation Used in this Report
Phil Khan	Phil Khan
Badu	Badu
Yerramurra	Yerramurra
Nundagurri	Nundagurri
Eora	Eora
Wandandian	Wandandian
Ngunawal	Ngunawal
Gangangarra	Gangangarra
Elouera	Elouera
Darug Custodian Aboriginal Corporation	DCAC
Goobah Developments	Goobah Developments

2.1.2 Project Information and Comment on Methodology

All Registered Aboriginal Parties were sent project information and the proposed assessment methodology on June 11th, 2015 with a deadline of July 10th, 2015 for responses (see **Appendix 1B**). Specifically, all Registered Aboriginal Parties were requested to provide comment on:

- The proposed assessment methodology.
- Any objects or places of cultural value to Aboriginal people which may be located within the area proposed for archaeological test excavations, or be relevant to those excavations.
- The potential management of artefacts retrieved during the proposed Aboriginal archaeological test excavations.

In addition, Registered Aboriginal Parties were requested to inform MDCA of any information of a culturally sensitive nature so that appropriate protocols of access and use could be developed. The comments received are shown in **Table 5** and where relevant, included in **Appendix 1B**.



Table 5. Responses to Information and Methodology Mailout.

Registered Aboriginal Party	Response
CBNTCAC	CBNTCAC provided a response in agreement with the proposed methodology but requesting a test pit layout plan, which was subsequently provided. CBNTCAC suggested that all excavated material should be wet sieved using the smallest sieve size available (3mm) as opposed to the Code recommended size (5mm). The CBNTCAC also observed that the knoll may have been used for ceremonial purposes rather than a camp site due to its elevated nature and views of the surrounding terrain.
DCAC	DCAC supported the proposed methodology and stated that the subject land is important to the Darug people as it represents continued occupation and is within close proximity to a number of significant sites. DCAC also voiced concern about Aboriginal groups registering from 'outside of the area'.
Goobah developments	Goobah Developments supported the proposed assessment methodology.
Phil Khan	Mr Khan agreed with the proposed methodology.
DACHA	DACHA supported the proposed methodology.

2.1.3 Comment on Draft Report

The comments of the Registered Aboriginal Parties as discussed above were used in the formulation of the draft Aboriginal Cultural Heritage Assessment Report which was prepared on completion of the archaeological test excavations. These draft documents were sent to all Registered Aboriginal Parties for comment on 30 October 2015 with a deadline of 30 November 2015 for responses (see **Appendix 1C**). Specifically, all Registered Aboriginal Parties were requested to provide comment on:

- their views on the draft recommendations including a proposal for the reburial of the excavated artefacts.
- Any other views or information relating to the Aboriginal Cultural Heritage Assessment parties believed should be considered in relation to assessment of the current State Significant Development application.

The comments received are shown in **Table 5** and where relevant, included in **Appendix 1C**:

Table 6. Responses to Draft Report.

Registered Aboriginal Party	Response
CBNTCAC	The CBNTCAC were pleased with the preservation outcome and supported the draft recommendations, suggesting a caveat be placed on the land title to ensure that the Prestons Creek Bank site is protected in relation to further future uses of the land. This suggestion is discussed further in Section 7.0.
GLALC	The GLALC responded in full support of the draft report recommendations.
Council's Aboriginal Committee	The Liverpool City Council Aboriginal Consultative Committee supported the recommendations of the report but suggested that monitoring should be undertaken during development works and any artefacts retrieved should be recorded. They further suggested that a plan should be made for the relocation of any retrieved artefacts – these recommendations are discussed further in Section 7.0.



2.2 Aboriginal Cultural Significance within the Subject Lands

The Aboriginal community consultation undertaken in relation to the current project has not identified any specific Aboriginal cultural connections or significance relating to the current subject lands in particular, though it is apparent from correspondence that several RAPs regard the general area as being part of their area of cultural association, and that a general level of significance is ascribed to the area and its potential to contain Aboriginal archaeological remains as an indicator of past Aboriginal presence in the landscape.

The CBNTCAC have specifically noted that the elevated knoll “may have been used more for ceremonial purposes, as to a camp site, where people sat and made stone tools. The 360 degree outlook, with views to the mountains and out towards the Heathcote area certainly make it a place that Aboriginal people would have used for one purpose or another.” Accordingly, one of the aims of the Aboriginal archaeological investigations was to seek to determine the nature of past Aboriginal use of the knoll and surrounding areas within the subject land. These investigations have shown that the knoll was used for stone artefact manufacture in the past, but that very little evidence of this has survived more recent historical uses of the land.



3.0 Landscape Context

3.1 Local Environmental Context

The subject land is situated on the south-western portion of the Cumberland Plain, which is characterised by low undulating hills dissected by numerous watercourses with shallow valleys and relatively large watersheds fed by semi-permanent and ephemeral streams. The subject land is located along the northern end of a low, rounded spur forming the watershed between Cabramatta Creek about 500m to the west and a tributary of Maxwells Creek to the east, across which the subject land extends. The subject land includes a small, elevated knoll on the northern end of the spur, which forms the highest point in the surrounding landscape, with views that extend a considerable distance beyond the adjacent creek catchments to the lower Blue Mountains in the west and as far as Holsworthy and the Royal National Park to the south-east. The top of the knoll is around 50m AHD and is relatively flat across an approximately 50m diameter area. The land slopes down to the north, west, east and south-east from there, at up to a 5% slope down to around 32.5m AHD along the creek corridor.

The subject land is underlain by Bringelly Shale bedrock, of the Wianamatta group (Clark & Jones 1991) which has weathered to produce residual soils of the Blacktown Soil Landscape (Hazelton *et. al* 1989). The Blacktown soil landscape is characterised by gently undulating rises of broad rounded crests and ridges with gently inclined slopes such as characterised by the subject land (Bannerman and Hazelton 1990:28-31). In landscape contexts like the subject land, these soils can consist of up to 30cm of friable brownish black loam A1 (topsoil) horizon and 10-30cm of clay loam A2 horizon, on a weathering clay subsoil. Archaeological deposits in these soils are likely to be restricted to the A horizon and are vulnerable to natural erosion and historical disturbance. There is no outcropping bedrock present within the subject land. Although most of the subject land is now covered by pasture grass, regular small exposures show that this original soil A horizon is generally only up to 20cm thick. Original topsoil is absent in areas subject to historical disturbance such as ploughing and other earthworks (e.g. dam and drainage works) and modern house and shed construction.

The majority of the subject land currently comprises cleared paddocks with some sparse recent regrowth. Prior to clearing, the subject land is likely to have supported eucalypt woodland and dry sclerophyll forest characterised by Red Gum (*E. tereticornis*), Narrow-Leafed Iron Bark (*E. crebra*), Grey Box (*E. moluccana*) and Spotted Gum (*E. maculata*). The creek and intervening forest environments would have supplied Aboriginal people with a diverse range of foods and raw materials, and the surrounding areas are likely to have offered a range of faunal and plant resources to Aboriginal people for use as food and the creation of implements. Stone raw materials such as silcrete are known to have outcropped or be



available as creek cobbles to the north in the central Cumberland Plain. Aboriginal settlement was closely tied to the availability of freshwater which is likely to have been intermittently available within the subject land and only in the lower elevations. It would appear there are no springs in the upper elevations (see below).

We have little understanding of the precise patterning and availability of resources in the region prior to European contact, particularly in relation to the distribution of specific plant resources. Although a detailed regional study of the available archaeological and historical evidence for the way in which Aboriginal people lived in the Sydney region prior to European contact has been prepared (Attenbrow 2010), extracting this evidence to overlay on particular local areas is unlikely to help determine how specific areas were used. For example we have little understanding of how and where and why Aboriginal people used specific resources; and more importantly and more enigmatically the degree to which their movement through the landscape was influenced by ceremonial and other cultural factors or constraints.

Being some distance from a major creekline on largely sloping ground, the subject land does not immediately present itself as an obvious major focus for Aboriginal activity in the past. It is also noted that residents of the historic Benera homestead, constructed a cistern on the knoll in the mid-19th century, which collected water via its roof, indicating that spring water or surface water was not available in this locality. However, the knoll area is a prominent point in the local landscape, with significant views in most directions, and is connected via a spur some five kilometres to the south to a ridgeline at Edmondson Park which overlooks the Georges River. These connections may have facilitated Aboriginal use of, or movement through, the subject land. As discussed below, it is also possible that the knoll may have afforded an appropriate location for ceremonial activities, distant from usual camping events.

3.2 Land Use History

Aboriginal people continued to live within the Sydney region after the arrival of Europeans, including the continued practice of many traditional activities. As time progressed, Aboriginal people began to be increasingly affected by the encroachment and government of settler society. This is reflected in a number of historically documented Aboriginal missions, campsites (often attached to large farms) and other places used by Aboriginal people.

A number of studies of post-European contact Aboriginal history and archaeology have included the Sydney area (e.g. Goodall 1982 & 1996, Kohen 1993, 2006, Irish & Goward 2012, Irish 2014), as well as portions of the central Cumberland Plain (e.g. Brook & Kohen 1991, Flynn 1997). It is acknowledged that many other sources of information remain to be consulted. Aboriginal people continued to use the general area well into the nineteenth



century. For example, about four kilometres south-west of the subject land, Aboriginal ceremonial activities were being conducted around the Denham Court property until at least the mid-nineteenth century (Liston 1988:57). Research by Liston and others, as well as Paul Irish of MDCA for a doctoral project on historical Aboriginal use of the Sydney area, has not recovered any records of the Benera property having being used for similar purposes at this time. It is clear however that historical Aboriginal use of Sydney was not random, but influenced by existing cultural connections and specific personal relationships with some European landowners (Irish & Ingrey 2013), and the historical owners of the property have not emerged among those who developed long-term cross-cultural relationships. The specific area of the subject land does not appear to have been used as a mission or reserve or have more recent Aboriginal associations according to research undertaken to date.

The subject land was part of a large, early-nineteenth century land grant of some 1000 acres known as Benera. The Benera homestead was constructed in the 1850s on the knoll within the subject land, comprising a large U-shaped timber dwelling with associated forecourt, gardens and water tanks (**Figure 4**, and see MDCA 2015 for further information). Little is known about the use of the property throughout the nineteenth century, though it was most likely cleared and used for grazing. Historical activities throughout the twentieth century have been discerned from a review of historical aerial photographs at Land & Property Information (1930, 1947, 1970, 1991, 2002) and on Google Earth (from 2005 to present). By 1930, the subject land was almost completely cleared of timber, and by the 1940s a dam had been constructed along the minor tributary of Maxwells Creek in the eastern portion of the subject land (**Figure 4**). By the 1970s portions of the subject land were in use as market gardens and staunchions supporting north-south running high voltage powerlines had been installed on the western lower slopes above the creekline (**Figure 5**). In the 1980s the subject land was purchased by the most recent owners, who constructed the two brick dwellings currently present along Yarrunga St. The easternmost house can be seen in the 1991 image (**Figure 6**), along with the associated sheds, fenced paddocks and cattle troughs. This image also post-dates the destruction of the Benera homestead by fire in 1986. As **Figure 7** clearly shows, extensive market gardening has subsequently taken place across the western two thirds of the subject land, and an additional house and associated buildings had been constructed along Kurrajong Road in the southern portion of the subject land. In 2013 extensive earthworks were undertaken to infill and channelise the southern extent of the minor creekline.

These impacts appear to have resulted in considerable disturbance to most portions of the subject land. Given that subsurface archaeological evidence is likely to be restricted to the uppermost soil horizon, these impacts could be expected to have disturbed (or destroyed) most physical traces of past Aboriginal use of the area that may once have been present.



Figure 4. Aerial photo from 1947 showing Benera Homestead on the knoll.

[Source: Land & Property Information, Liverpool Run 24, January 1947].



Figure 5. Aerial photo from 1970 showing cleared paddocks and market gardens.

[Source: Land & Property Information, Cumberland Series Run 20, 7 July 1970].



Figure 6. Aerial photo from 1991 showing houses and paddocks along Yarrunga St.
[Source: Land & Property Information, Penrith Run 12, 20 September 1991].



Figure 7. Aerial photo from 2005 showing second house and extent of recent ground disturbance, including additional market gardens.
[Source: Land & Property Information, 2005].



4.0

Archaeological Context

4.1 Previous Archaeological Work & Site Recordings

4.1.1 OEH AHIMS

For the current assessment, the Office of Environment and Heritage ('OEH') Aboriginal Heritage Information Management System ('the AHIMS Register') and Catalogue of Archaeological Reports were consulted. A search of the AHIMS Register of an area 4km x 4km centred on the subject land revealed that 65 Aboriginal sites have been previously recorded in the area (see **Appendix 3** and **Figure 8**).² All of the sites within close proximity to the subject land are open campsites, and comprise one or more Aboriginal stone artefacts visible on the ground surface, sometimes in association with areas with the assessed potential to contain further subsurface artefacts (known as Potential Archaeological Deposit or 'PAD'). The sites have been identified as a result of assessments for nearby residential and industrial development (see below).

The dominance of open campsites in the area reflects both the types of surviving evidence in the vicinity, and the archaeological research that has taken place in recent decades. Specifically it is noted that:

- sandstone does not outcrop within or in close proximity to the subject land and therefore shelter sites, rock engravings, shelter art or axe grinding grooves are not a feature of the immediate local landscape. Similarly scarred trees are rare in the region, and none are recorded within close proximity of the subject lands despite a history of archaeological survey in this area, most likely because of the high degree of historical land clearance as discussed above.
- Archaeological research over the last 30 years has been almost exclusively undertaken in a cultural heritage management context, where identification of areas of Aboriginal archaeological potential and visible evidence in the form of surface manifestations of stone artefacts have been the predominant recorded features.

As **Figure 8** shows, no Aboriginal sites are currently registered within, or immediately adjacent to the subject land. The closest recorded Aboriginal sites (#45-5-3709 and #45-5-3710) were recorded during a study for the widening of Kurrajong Road, and are registered in the wrong location.³ Site #45-5-3710 (KB2) is a piece of unworked silcrete (manuport) located on the

² AHIMS Search of 9/10/14 of MGA coordinates in Zone 56 E300600-304600, N6240500-6244000.

³ The sites were recorded as AMG coordinates but registered as MGA, placing them approximately 200m further southwest than their actual recorded location. The AHIMS Registrar has been notified of these errors.



southern side of Kurragong Road opposite the subject land, and presumed to have been discarded by Aboriginal people as this stone does not occur naturally in the local area. Site #45-5-3709 (KB1) is an isolated stone artefact (broken chert flake) found in a driveway along Kurragong Road some 150m to the east of the subject land.

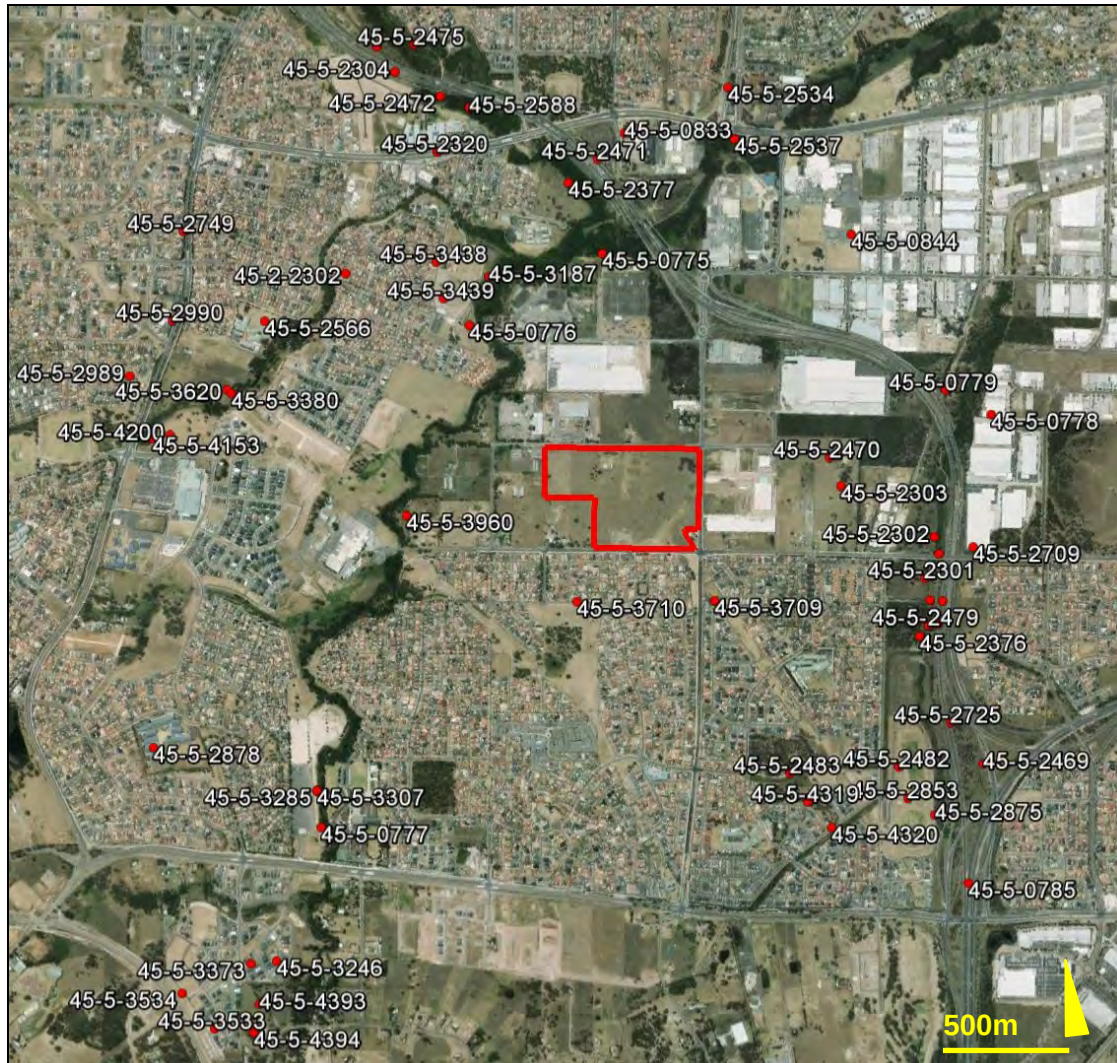


Figure 8. Registered Aboriginal sites in the vicinity of the subject land.

4.1.2 Other Register Searches

In addition to the AHIMS Register search, several other repositories were searched online on 11/6/15 to determine whether any additional Aboriginal sites or areas of potential had been identified within or adjacent to the subject land. The results of these can be summarised as follows:



- A search of the Australian Heritage Database (incorporating the Register of the National Estate) was undertaken for Aboriginal heritage items within the Liverpool Local Government Area. The search returned no items listed for their Aboriginal heritage values within the vicinity of the subject land, though the Benera Homestead site is listed on the former Register of the National Estate for its European heritage values.
- The NSW State Heritage Inventory (incorporating the NSW State Heritage Register) was searched for Aboriginal heritage items within the Liverpool Local Government Area. The Inventory includes places listed on the State Heritage Register as well as on local government LEPs. There are no items listed within or in close proximity to the subject land on the State Heritage Inventory or State Heritage Register for their Aboriginal heritage values, however the Benera Homestead site is listed on the State Heritage Inventory for its European heritage values (see MDCA 2015 for more details).

4.1.3 Local Archaeological Research

There have been no previous Aboriginal archaeological surveys and/or excavation specifically targeted at the subject land, however many archaeological investigations have been undertaken within the surrounding area. As noted above, Aboriginal archaeological sites in the surrounding area comprise mainly campsites consisting of surface and/or subsurface deposits of stone artefacts in the vicinity of creek lines. Most of these show some degree of historical disturbance and generally consist of relatively low densities of artefacts, but more complex sites with greater densities of artefacts do occur. Below is a summary of relevant past assessments within the vicinity of the subject land. A focus has been taken on studies that have involved excavation to provide context for the current subsurface investigations.

An area adjacent to the southern and eastern boundaries of the subject land was assessed by Therin Archaeological Consulting (2003) prior to the upgrade of Kurrajong and Bernera Roads. Therin surveyed the road margin (3-20m wide) on both sides of the roads. During the survey, only two isolated finds were identified, *KB1* (AHIMS # 45-5-3709) and *KB2* (AHIMS # 45-5-3710) as discussed above. As a result of this study, areas along Maxwells and Cabramatta Creek were assessed as having high archaeological potential and three areas of PAD were also identified. These included *PAD KB1* on the eastern side of Cabramatta Creek, *PAD KB2* on the western side of Cabramatta Creek and *PAD KB3* on both sides of Kurrajong Road at Maxwells Creek.

Subsequent to Therin's study, JMcDCHM (2010) investigated a smaller portion of the road upgrade area, 600m to the south-west of the subject land. During this survey, a single silcrete



manuport, *KB3* (AHIMS # 45-5-3960) was recorded. The study area was assessed as having low to no archaeological potential due to high levels of historical disturbance.

A study by AMBS (2000) for a proposed sewer main, involved two stages of archaeological excavation of an area of PAD associated with site *MC1* (AHIMS#45-5-0778) about a kilometre to the east of the current subject land. The PAD was located within a remnant patch of Cumberland Plain Woodland on the eastern bank of Maxwells Creek. The initial testing and salvage involved the excavation of two 4 x 4m areas that were proposed as manhole access points. The first area, *OA1*, was found to consist of a disturbed 30cm deep brown podzolic soil atop yellowish brown basal clay. A total of 32 artefacts were recovered from this area amongst European debris. The second area, *OA2*, contained a thin intact topsoil of brown podzolic soil atop a layer of yellowish brown podzolic soil that was then underlain by a reddish yellow basal clay. A total of 34 artefacts were recovered from this area. The second stage of works was initiated due to a change in the proposed sewer route. It involved the mechanical excavation of a 50 x 1m transect called Area 3, and a number of 1x1m squares along part of the route. The deposit here mirrored that of *OA1*. A total of 85 artefacts were found during these investigations. Silcrete was the most common raw material (68%) of the two stages of excavation, followed by tuff (13%) and then quartz (9%). Other raw materials included chert, indurated mudstone, petrified wood and volcanic material. The assemblage included backed blades, retouched flakes, whole flakes, broken flakes, flaked pieces, cores and a ground stone hatchet. The assemblage was interpreted as representing a gradual deposition of artefacts through discard or through small knapping events. This was mostly based on the lack of debitage present. It was assessed as being a low-density extension of *MC1*, which dates to the mid-late Bondaian period. All areas had an artefact density of less than 2.1 artefacts/m². The entire site, including the original extent of *MC1* was designated as having high archaeological and cultural significance. The high significance was designated due to the rarity of excavated low-density scatters on the southern Cumberland Plain, the fact that most of the site was undisturbed and that it is located in a pocket of Cumberland Plain Woodland. Within the context of Australian archaeology as a whole it was assessed as having low significance.

An archaeological salvage excavation by Jo McDonald and Beth Rich (1995) was undertaken of Aboriginal site *WH3* (AHIMS #45-5-0965), 2.5km west of the current subject land. This site was located on a low rise, a remnant of an alluvial terrace in association with Cabramatta Creek. A total of 3,686 artefacts were recovered on a knoll landform, 90% coming from two silcrete knapping floors for the production of backed blades. The remaining 10% were recovered from an area over 110 x 130m. Tool types included cores, hatchets and backed blades. Over the entire site, 47 backed blades were identified, the majority of which were



made on silcrete. Artefacts were found in deep intact topsoils of the remnant terrace. The site was assessed as belonging to the middle to late Bondaian period.

Austral Archaeology (2008a) undertook a salvage excavation prior to road upgrades along Cowpastures Road, 2km west of the current subject land. Excavations were of a site known as *Cowpastures Road PAD 1* (AHIMS #45-5-2989), on the eastern side of the road, on broad creek flats. Some 75 squares were excavated and a total of 1,129 artefacts recovered, 29 of which were backed blades. The assemblage also included retouched flakes, flaked pieces and a small number of cores and one point. The most prevalent raw material was silcrete followed by a small amount of fine grain siliceous, quartz, quartzite, chert, volcanic and clear quartz. The soil profile was consistent with the South Creek Soil Landscape. The deposit was considered to be generally undisturbed except in areas where historic postholes and ploughing was found to have impacted the site. Artefacts were more common in the northern portion of the site and vertically distributed most prominently at 40cm depth, beyond the plough zone. The assemblage was assessed as representing a mid-late Bondaian tertiary flake reduction/ production site and it was suggested that this site was part of a larger site complex which included nearby site *WH3* (see above).

Austral (2008b) undertook salvage excavations of *Hoxton Park PAD 2* (AHIMS #45-5-3380), which is 1.5km north-west of the subject land. This PAD is situated along a portion of both sides of an unnamed tributary of Cabramatta Creek but only the western side of the creek was excavated as it was assessed as having higher potential. A total of 12, 1 x 1.2m machine pits were excavated along a single transect 86m long. Soil profiles were revealed to vary according to distance from the creek. The profile closest to the creek showed shallow deposit of chalky light to mid brown sandy silty loam on orange/grey mottled clay. The soil profile further from the creek demonstrated alluvial deposit. The deposit was 40-50cm deeper consisting of moist, sandier mid coloured silty loam on orange silty clay. From the 12 pits, 33 artefacts were recovered. The highest number artefacts was 9 in a single pit and overall results indicated a very low density across the site. Artefacts were mostly recovered from the upper 30cm but were found up to 60cm depth. Silcrete dominated the assemblage (70%) followed by silicified tuff (21%), then quartz.

Two areas were excavated by AHMS (2008a) prior to the upgrade of Hoxton Park Road. These areas are 1.2km north of the current subject land. The first area, known as 'the eastern area' was 12m² of land next to Hinchinbrook Creek. 'The western area' was 25m² of land on a small rise 100m away. The deposit in the eastern area consisted of deep (>50cm) sandy levee soils along the creek that had been truncated in places by fill. The western area consisted of a 'typical contrast texture soil'. The upper unit of the western area, which was 25-30cm deep,



was disturbed by compaction and some vehicle churning. The majority of artefacts were recovered from the western area. These totalled 148 artefacts (95%) with concentrations ranging from 1-15 artefacts/m². These were found predominantly within the interface of the A and B Horizons. A total of eight artefacts (5%) were recovered from the eastern area. Four of these were recovered from fill. In both areas the most common raw material was silcrete (47.5%) and tuff was also abundant. Other materials included chert, quartz, fine grained siliceous and quartzite. It was suggested that these raw materials were sourced from a significant distance. The assemblage was dominated by broken flakes followed by angular fragments, complete flakes, broken and complete tools, heat shatter, cores and a core fragment. Two backed blades were recovered also. There was limited evidence that lithic manufacture occurred on site but it was interpreted as being used for repeated, short periods. The site was dated to the Bondaian period and was given low to moderate archaeological significance.

AMBS (2010) conducted test excavations as part of the assessment of the South West Rail Link- Glenfield to Leppington Rail Line which runs 2.5km south-west of the subject land. The locations of the excavation areas were determined by geotechnical testing requirements and environmental constraints, and as a result, were not necessarily positioned in areas most likely to contain archaeological deposit. The largest numbers of artefacts were recovered from lower slopes and flats within 50-100m (and to a lesser degree within 200-300m) of significant water resource zones, just outside the flood inundation zones of the creeks. Most artefacts were found along Kemps Creek. Few artefacts were recovered along elevated landforms in the South West Rail Line study area but this may suggest an increase in previous impacts and associated erosion affecting site integrity, and not past Aboriginal land use

MDCA (2011) undertook test and salvage excavations within the corridor of the proposed Hinchinbrook Creek Bridge in the creek riparian corridor, 2.6km north-west of the subject land. The study included the excavation of sixteen trenches within the proposed road/bridge corridor (thirteen on the western side of Hinchinbrook Creek, and three on the eastern side). The excavations demonstrated that the land to the east of the creek was highly disturbed with few artefacts recovered. The area to the west of the creek was found to be relatively undisturbed, although artefact densities were low. One trench was found to have a higher density of artefacts demonstrating a focus for Aboriginal activity and the area surrounding this trench was selected for further investigation during the salvage excavations.

The salvage excavations consisted of fourteen 1m x 1m manually excavated pits surrounding the original 2m x 1m test trench. All pits were excavated in 5cm spits onto orange basal clay. The depth of the pits varied from 35-40cm below ground surface. A total of 225 artefacts were



recovered during the salvage excavations, most of which (n=187) were found within one pit. Artefact numbers were found to taper off from approximately 30cm depth, with the greatest densities occurring from 15-25cm depth. The primary raw material used in artefact manufacture at this site was silcrete with a small percentage of quartz and silicified tuff. A total of 26 backed blades were found and blade cores were also present. The site was assessed as representing a singular event of Bondi Point manufacture. A clay ball feature was located across four squares. It has been suggested that the clay balls recorded during the salvage excavation were remnants of clay cooking balls.

These previous studies reveal that many excavated Aboriginal sites in the local area contain low-density subsurface deposits which demonstrate some degree of land-use related disturbance. Archaeological deposits have most commonly been found in areas along Maxwells and Cabramatta Creeks on lower slopes and creek flats and are present as low-density background scatters. Some more complex, high-density sites do occur, such as the WH3 site complex but these are generally rare. Silcrete is the dominant raw material used in artefact manufacture, which is known to be common across the Cumberland Plain. Minimal amounts of quartz, tuff, chert and indurated mudstone are also commonly reported. Artefacts are found in the upper soil units of the A Horizon and predominantly consist of expediently flaked stone and cores but diagnostic tool types do occur. These include backed blades, retouched flakes, ground stone hatchets and points. Backed blades appear to be relatively common and most sites have been dated to the Bondaian period, which is characterised by the presence of such tool types.

4.2 Regional Land Use and Modelling

The distribution of Aboriginal sites in the Sydney region is strongly related to bedrock geology and local topographic features, including elevation and the presence of water resources. In general, the region appears to most commonly manifest archaeological evidence as stone artefacts in open and subsurface contexts. The absence of sandstone in the immediate subject land precludes the presence of axe grinding groove or shelter sites. Stone types used in artefact manufacture usually reflect proximity to stone sources and artefact types and size can reflect distance from sources. Less frequently occurring sites include raw material extraction sites, stratified deposits, scarred trees where trees of sufficient age have survived and axe grinding grooves where there are exposures of suitable sandstone in the Wianamatta Group of shales and clays. Most of these sites have been identified during the course of archaeological survey prior to development, others as a result of broad area reconnaissance and research on the archaeological patterning across the Cumberland Plain.



Broad area studies include Kohen's 1986 doctoral research on the western Cumberland Plain Kohen (1986:292) in which he concluded that the availability of water was the major influence on the distribution of sites [site selection process] across the landscape. Smith undertook a major compilation and analysis of data for the northern Cumberland Plain (Smith 1989a). At the time of the study there were a little under 400 known sites on the Cumberland Plain, over 90% of which were open campsites, most of which were small (<50 artefacts), dispersed and disturbed. Smith's study suggested that permanent water might have been a more important variable than the location of stone resources as a site location predictor. This study also suggested that sites will be located on all topographic units, including creek banks and flats, ridge/hill tops and slopes, except for where destroyed by European impact and/or factors of gross taphonomy such as flooding and erosion. Data compiled in this study suggested that the highest site densities occurred around swampy/marshy areas. In addition, at the time of Smith's study, approximately 50% of all sites recorded were located within 50m of a creek line, whilst sites had also been frequently identified on ridges situated over 200m from a water source.

Smith (1989b) also examined these ideas in a more local context as part of a planning study for Aboriginal archaeological sites within future release areas (over 25km²) around Liverpool, sampling twenty areas, mainly along creeklines, and including lands to the north and east of the current subject land. Her Liverpool study tended to confirm Kohen's (1986) site location model that almost 75% of sites were found in association with a permanent water source and over 60% of sites were within 50m of water. Smith concluded that sites in the Liverpool area were more likely to occur on creek flats than on any other topographical feature, and that the probability of sites occurring on creek flats increased near creek confluences. These results were however inherently biased by the predominance of creeklines in the sample survey areas.

More recent research has contributed new information useful for refining original models and observations. As a result, our perception of the archaeology within the context of the Cumberland Plain has changed accordingly. A compilation of data for the region held in the AHIMS Register in the late 1990s identified records for a little under 670 sites (JMcDCHM 1997).⁴ Open campsites were found to be the most prevalent site type (89%), followed by scarred trees (2.1%). A further 3.5% of the site types consisted of isolated finds in combination with various other site types. Shelter sites and axe grinding grooves, generally found around

⁴ This compilation of AHIMS Register records was prepared as part of the assessment process completed for the ADI site at St Marys.



the periphery of the Cumberland Plain at the interface of the shale and sandstone bedrock geologies accounted for a further 3.6% of recorded sites.

The above study also highlighted the problem of archaeological visibility on the Plain and illustrated that existing models based primarily upon surface evidence are inadequate in their ability to describe the characteristics of sites in the region or to predict site location and/or variability. Specifically, the study concluded with the latter concern in mind that:

- 17 out of the 61 excavated sites on the Cumberland Plain had no artefacts present on the surface prior to excavation. However, most areas with sparse or no surface manifestations contained considerable archaeological deposits.
- The ratio of recorded surface to excavated artefacts is 1:25 across the Plain.
- None of the excavated sites could be properly characterised on the basis of their surface artefacts alone.
- Open campsites are located in all landscapes on the Cumberland Plain. The predominance of sites recorded along creek banks is likely to be indicative of surface visibility conditions and taphonomic factors, rather than the human distribution of artefacts across the landscape.

The results reported for the *RHIP Stage 1* excavations (McDonald and Rich 1993; and, JMcDCHM 1999) along with the analysis of the Cumberland Plain data compiled for the ADI site (JMcDCHM 1997) and other recent excavations, provide the basis for a detailed predictive model for Aboriginal sites on the Cumberland Plain reported by McDonald (1999).

White and McDonald have discussed the distribution of Aboriginal sites on the Cumberland Plain as interpreted through lithic analysis of excavated sites in the Rouse Hill Development Area (RHDA) (White & McDonald 2010). This analysis brings together data from 631 dispersed 1m x 1m test squares from nineteen sample areas which yielded 4,429 stone artefacts in total. The findings of this study generally support earlier models that predicted correlations between proximity to permanent water sources and site location, but also highlighted the relationship between topographical unit and Aboriginal occupation.

The major findings of the study were that artefact densities were most likely to be greatest on terraces and lower slopes within 100m of water. The stream order model was used to differentiate between artefact densities associated with intermittent streams as opposed to permanent water. It was found that artefacts were most likely within 50-100m of higher (4th) order streams, within 50m of second order streams, and that artefact distribution around first order streams was not significantly affected by distance from the watercourse (White and



McDonald 2010: 33). Overall landscapes associated with higher order streams (2nd order or greater) were found to have higher artefact densities, higher maximum densities, and more continuous distribution than lower order intermittent streams. The analysis also concluded that while there were statistically viable correlations that demonstrated a relationship between stream order, land form unit and artefact distribution across the RHDA, the entire area should be recognised as a cultural landscape with varied levels of artefact distribution (White and McDonald 2010: 37).

White and McDonald (2010) and McDonald (JMcDCHM 1999: 19-21) conclude that:

I) The size (density and complexity) of archaeological features will vary according to permanence of water (ascending stream order), landscape unit and proximity to lithic resources in the following way:

- In the headwaters of upper tributaries (first order creeks) archaeological evidence will be sparse and will comprise little more than background scatters;
- In the middle reaches of minor tributaries (second order creeks) archaeological evidence for sparse but focused activity (e.g. one-off camp locations, single episode knapping floors) will be expected;
- In the lower reaches of tributary creeks (third order creeks) archaeological evidence for more frequent occupation will be expected. This will include repeated occupation by small groups, knapping floors (perhaps used and re-used), and evidence of more concentrated activities;
- The artefact density of sub-surface deposits within first, second and third order creek contexts is likely to be less than 25 artefacts per square metre of excavated deposit (JMcDCHM 2004: 79).
- On major creek lines (fourth order) archaeological evidence for more permanent or repeated occupation will be evident. Sites will be complex and may even be stratified;
- Creek junctions may provide foci for site activity; the size of the confluence (in terms of stream ranking nodes) could be expected to influence the size of the site;
- Ridgetop locations between drainage lines will usually contain limited archaeological evidence although isolated knapping floors or other forms of one-off occupation may be in evidence in such a location.⁵

II) Naturally outcropping silcrete will have been exploited and evidence for extraction activities (decortication, testing and limited knapping) would be found in such locations.

⁵ Few sites were encountered in ridgetop locations during the RHIP Stage 1 project principally because most of the infrastructure development was located within close proximity to creeklines. Likewise, where investigations were sited within more elevated topographic positions, more extensive disturbance from recent landuse practices were also encountered.



- III) Sites in close proximity to an identified stone source would cover a range of size and cortex characteristics. As one moves away from the resource, the general size of the artefacts in the assemblage should decrease, as should the percentage of cortex. The increasing number of new (in particular) silcrete sources has made the testing of the distance decay model (Dallas & Witter 1983) more difficult, and suggests that this model is a poor mechanism for explaining raw material preferences around the Plain.⁶
- IV) Most sites on the Cumberland Plain have been dated to the late Holocene and it has been argued (Kohen 1986) that most date to the last 1,000 to 1,500 years. There is increasing evidence (e.g. Attenbrow 1987, McDonald & Rich 1993) that dates obtained from shelter sites around the Sydney region are comparable to those available for stone tool assemblages from the Plain. There is some debate over the oldest date for the settlement of the Sydney Basin. Most sites however date to the last 3,000 years.

While this modelling of site distribution suggests that the location and density/complexity of archaeological evidence is related to stream order, it is noted that these conclusions are largely drawn in relation to data on the northern Cumberland plain. In the south and south-west, where the subject land is located, other studies suggest that stream order is less significant and distance from reliable water is a more consistent indicator. Most sites have been found within 300m of permanent water and are most likely to be open artefact scatters or isolated finds on alluvial flats, terraces and lower slopes. There is little evidence to suggest that high stream order has any correlation with artefact densities or that creek confluences are associated with greater complexities. In general, archaeological deposits on the southern Cumberland Plain are of low densities with intermittent higher density clusters in areas in the vicinity of permanent water.

4.3 Field Inspection of the Subject Land

4.3.1 Approach and Sampling

As no previous Aboriginal archaeological investigations or recordings had been undertaken within the subject land, field inspection aimed to characterise the nature of archaeological sensitivity and potential within the subject land and to identify any visible Aboriginal archaeological remains present within the subject land. The subject land is largely covered in pasture grass, limiting surface exposure, and negating the value of random or stratified sampling. At around 20 hectares, the subject land is of manageable size to be investigated in

⁶ McDonald (JMcDCHM 1999:21) reports that there is an increase in indurated mudstone as a preferred raw material in the northern end of the RHIP study area, while silcrete is preferred raw material further south. The question of raw material procurement, however, was not further advanced by the *RHIP (Stage 1)* results.



its entirety, focussing on all exposed areas of ground as well as appraising visible evidence of ground disturbance.

4.3.2 Field Methods and Recording

An initial inspection of the subject land was undertaken on 16 April 2015 by MDCA principal consultant Paul Irish and MDCA archaeologist Tamika Goward, together with Cubbitch Barta Native Title Claimants Aboriginal Corporation representative Glenda Chalker. This mainly concentrated on the knoll area and extent of Lot 34 in DP2359, but also included portions of the adjacent allotments (See **Figure 2**). Further field inspection of the remainder of the subject land was undertaken by MDCA principal consultant Paul Irish on 3 June 2015 following a detailed review of land use history summarised above.

Given the low degree of surface exposure across the subject land, it was not considered appropriate to conduct the survey in regularly spaced transects. Rather, the survey concentrated on an examination of all areas of exposed ground and any trees of sufficient age to bear scars of possible Aboriginal cultural origin. An appraisal of ground disturbance, surface visibility and thus estimated effective survey coverage was carried out during the site inspection to allow a tabulation of data (see **Section 4.3.5**) in a format consistent with the requirements of the DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010b).

Generally, reporting has been concerned with topography (whether sites, features or areas of potential sensitivity are located on slopes or flats etc.), context, vegetation, ground exposures, and nature of ground visibility and extent of disturbance. The distinction between site categories (open campsites vs. isolated finds etc.) and the definition of areas of potential sensitivity was determined according to the following categories:

- Isolated Finds consist of single artefacts that are located more than 50m apart or otherwise obviously unrelated in context. The distance is arbitrary and reflects the accepted industry definition for the last three decades.
- Open campsites comprise open artefact scatters that consist of two or more artefacts situated within 50m of each other unless obviously unrelated in context.

The following attributes of each stone artefact located during these investigations were to be recorded:

- Artefact Type: This category records the presence of flakes, implements flaked pieces and cores etc.
- Raw Material: Raw materials may include silcrete, indurated mudstone and quartz, etc.
- Dimensions: Maximum length, width and thickness of finds are to be recorded.



- Other: Comments include the presence of cortex and retouch possible use wear indicators etc.

In addition, frequently used criteria inclusive of landform, aspect, topography and subsurface integrity have also been used to define open areas of Potential Archaeological Deposit (PAD). These are defined as areas with the potential to contain sub-surface deposits of Aboriginal stone artefacts without surface evidence of such artefacts.

Any Aboriginal cultural material or relevant landscape features were plotted using site plans and a Garmin GPSMAP 60CSX handheld GPS set to the GDA coordinate system. GPS track logs were also kept detailing the routes and transects taken by the survey team.

4.3.3 Survey Observations

The field inspection noted the prominent position of the knoll within the Lot 34 and the surrounding landscape (**Figure 9**). The knoll is relatively flat and contains little obvious gross disturbance outside of the main area of the former Benera Homestead at its west end. Demolition works undertaken after the homestead burnt down appear to have distributed a now-overgrown layer of rubble and earth. Two large backfilled geotechnical trenches to the south of the homestead site (**Figure 9** and **Figure 10**). The knoll was covered with pasture grass and afforded little surface visibility, though adjacent areas provided an indication of the likely nature of soil deposits on the knoll. A cutting into the northern slope of the knoll behind the two houses, and another recently excavated deep geotechnical trench to the west of the knoll in Lot 35, suggested that some original topsoil (probably 10-20cm) had survived across the less disturbed parts of the knoll (**Figure 11** and **Figure 12**). To the north of the knoll, the ground slopes moderately down to Yarrunga Street and has been considerably disturbed by the construction of the two brick houses and associated sheds (**Figure 12**). To the east of the knoll, the ground also slopes moderately downward and has been disturbed by the construction of feedlots, transmission lines and market garden activities (**Figure 13**).

The paddock to the west of the knoll in Lot 35 slopes gently down from the knoll and is divided by fencing into a western and eastern half. The western half has been subject to gross disturbance from market gardening and ground exposures show clay subsoil devoid of any original topsoil (**Figure 14**). The eastern half is less disturbed overall, but contains former furrows from a vegetable garden that was located immediately to the west of the current dwellings on Yarrunga Street. Lot 43, to the south of the knoll has been completely disturbed through market gardening over several decades. It contains parallel beds around 20-30cm high and spaced about 1m apart with interlaying furrows (**Figure 15**). The soil in the beds contains clay subsoil and clearly shows that the thin original topsoil layer has been completely disturbed through market gardening activity.



The remainder of the subject land to the east of Lots 35 and 43 (Lot 33 in DP2359 and Lot 20 in DP1173483) are less disturbed overall, and consist largely of mildly sloping grassed paddocks down to the minor creekline, and a small area within Lot 20 on its opposite bank (**Figure 16** and **Figure 17**). Some localised disturbance is evident from market gardening in the western end and north-eastern corner of Lot 33, from the construction of the high voltage powerlines across both lots, and from the channelising of the creekline around the farm dam around the boundary between both lots (**Figure 18**). There was very little surface exposure across these lots, but occasional exposures demonstrated little or no remnant original topsoil. These two lots contain a small amount of regrowth, most notably a small stand of eucalypts in the north-eastern corner of Lot 33 (**Figure 19**).



Figure 9. View south-east from the knoll over backfilled geotechnical pit.



Figure 10. View west from the knoll top over the former Benera Homestead site.



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Figure 11. View south from behind current houses on Yarrunga St to knoll over cutting for former shed.



Figure 12. Geotechnical pit adjacent to the knoll showing some remnant original topsoil on clay subsoil and bedrock.



Figure 13. Eastern end of Lot 34 showing food troughs and fenced horse paddocks. View south.



Figure 14. View west across market gardened western portion of Lot 35.



Figure 15. Distinct furrows and beds within Lot 43.



Figure 16. View south from Lot 33 towards Lot 20, showing gently sloping grassed paddocks.



Figure 17. View west from Benera Road to the knoll across the minor creekline.



Figure 18. View south over recently channelised creekline to the left of the original 1940s dam, now an overflow of the main creekline.



Figure 19. Stand of regrowth eucalypts in Lot 33.



4.3.4 Field Inspection Results

The field survey did not result in the identification of any surface Aboriginal sites. Specifically, no Aboriginal stone artefacts were located, and none of the few mature trees within the subject land were found to contain scars of potential Aboriginal cultural origin. However, combining the observations during the field inspection with the background archaeological, historical and environmental reviewed, two areas of Aboriginal archaeological sensitivity were defined within the subject land, as shown in **Figure 20** and discussed below.

Table 7. Table of field inspection findings.

Feature(s)	Survey Unit	Landform
No Aboriginal objects located	n/a	n/a
Area of Aboriginal archaeological sensitivity	n/a (within Lots 33, 34, 35 in DP2359 and Lot 20 in DP 1173483)	Knoll, upper slope, mid slop and lower slope
Area of Aboriginal archaeological sensitivity	n/a (within Lot 20 in DP 1173483)	Lower slope

4.3.5 Survey Coverage

The following data summarises the nature of ground visibility, archaeological sampling and estimates of effective survey coverage based on the field inspection. These provide a basis for the discussion and assessment of the results that are presented in the following sections. This information demonstrates very low visibility across the subject land. This may appear to suggest that the observations made during the field inspection could not be extrapolated across the whole of the subject land. However the crucial factor, often forgotten, in such calculations is the value of observations of any given archaeologist/field surveyor of erosional processes, soil type and nature, and historical disturbance. There was ample observed evidence of historical disturbance within the subject land which, given the nature of the residual soils in this area, is likely to have disturbed any archaeological deposits which were previously resident in this landscape in those areas. The overall conclusions of the inspection and contextual review are consistent with this.

Table 8: Landform summary- samples areas.

Landform	Landform Area (m ²)	Area effectively surveyed (m ²) (= effective coverage of area)	% of landform effectively surveyed (= area effectively surveyed/ landform area x 100)	Number of sites	Number of artefacts or features
Knoll	12,500	63	<1%	0	1
Upper and Mid-slope	144,000	720	<1%	0	1
Lowerslope/ creek bank	51,000	255	<1%	0	2



Table 9: Summary table of effective archaeological survey coverage.

Survey Unit	Area	Visibility	Exposure	Effective Coverage Area	Effective Coverage %
n/a	207,500m ²	50%	1%	1,038m ²	<1%

4.4 Assessment and Site Prediction within the Subject Land

Based on the observations from the field inspection, and the review of environmental and land use history documented above, two areas of Aboriginal archaeological sensitivity deposit were defined within the subject land, as shown in **Figure 20**. These areas encompass the least historically disturbed portions of the subject land, including:

- the knoll area within Lot 34, where adjacent cuttings suggest that some original topsoil with the potential to contain Aboriginal archaeological remains is present; and
- hillslope areas below the knoll that do not appear to have been impacted by market gardening, house and shed construction or other intensive land use;



Figure 20. Areas of Aboriginal archaeological sensitivity (blue shading).

[Note: The area of historical archaeological sensitivity is shown in white outline].



The knoll area was also the location of the former Benera homestead and parts of the knoll were assessed as having the potential to contain historical archaeological remains, as shown in **Figure 20**. As the relationship between these remains and any remains of past Aboriginal use was unclear, this area was included within the broader identified area of Aboriginal archaeological sensitivity, and an appropriate excavation methodology was devised accordingly.

Based on the review of archaeological recordings presented above, the kinds of archaeological evidence that may be present within the areas of Aboriginal archaeological sensitivity are most likely stone artefacts. Specifically, the following types of archaeological evidence may be anticipated.

- Artefact scatters (open campsites) are surface or subsurface concentrations of stone artefacts, representing past activity by Aboriginal people. This evidence will be restricted to the uppermost horizons of the original soil profile (A1 horizon or A2 by downward movement).
- Isolated artefacts can occur without any other evidence for Aboriginal activity or occupation. Isolated finds can occur anywhere in the landscape and may represent the random loss, deliberate discard or abandonment of artefacts, or the remains of dispersed artefact scatters. *Manuports* are items consisting of raw materials of stone that do not naturally occur within the soil profiles of a given region. Transported onto a site by Aboriginal people from sources elsewhere, these items will have subsequently been discarded before use as flaked or ground stone tools.

Modelling of site distribution in the region also suggests that the location and density/complexity of archaeological evidence of open campsites is related to distance from reliable water. It is also possible that the knoll area may have functioned as a place of daily or perhaps ceremonial activity, due to its prominent location in the local landscape. As discussed above, the degree to which stream order correlates with intensity of use is currently unresolved in the southern Cumberland Plain, and the subject land provides an opportunity to examine the relationship between landform, water and past Aboriginal use.



5.0 Archaeological Test Excavations

5.1 Field Methods

5.1.1 Aims of the Archaeological Investigations

Based on the archaeological assessment outlined in previous sections, it was recommended that Aboriginal archaeological test excavations be undertaken within the areas of identified Aboriginal archaeological sensitivity as shown in **Figure 20**. The principal objective of the archaeological test excavations was to determine if Aboriginal cultural remains were located within the defined areas of *Aboriginal Archaeological Sensitivity*, and to characterise the extent and nature of any archaeological deposits encountered (within the limitations of the excavation methodology).

5.1.2 Timing of Excavations and Personnel

The Aboriginal archaeological excavations took place over 15 weekdays between Monday 3rd August 2015 and Friday 21st August 2015. The excavations were carried out by MDCA in association with the Gandangara Local Aboriginal Land Council and the Cubbitch Barta Native Title Claimants Aboriginal Corporation. A list of excavation participants is included as **Table 10** below.

Table 10. List of participants in the test excavation program.

Participant \ Date	3/8	4/8	5/8	6/8	7/8	10/8	11/8	12/8	13/8	14/8	17/8	18/8	19/8	20/8	21/8
Mary Dallas (MDCA)	x						x			x					x
Paul Irish (MDCA)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Tamika Goward (MDCA)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dan Tuck (MDCA)			x	x	x										
Mike Hincks (MDCA)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jodi Cameron (MDCA)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Susan Whitby (MDCA)			x	x	x			x	x	x			x	x	x
Caitlin Marsh (MDCA)	x	x				x	x				x	x			
Brad Maybury (GLALC)	x	x		x	x					x	x	x*			
Roy Murray (GLALC)			x	x	x	x	x		x		x*	x*	x	x	x
Matt Dennis (GLALC)	x	x*							x						
Robert Thorne (GLALC)						x	x								
Jack Gordon (GLALC)										x	x*		x	x	x
Glenda Chalker (CBNTCAC)	x	x				x	x			x	x	x	x		
Sarah Duncan (CBNTCAC)	x			x	x			x	x	x	x				x
Jaydon Chalker (CBNTCAC)		x	x			x	x							x	x
Donna Whillock (CBNTCAC)			x	x	x			x	x			x	x	x	

* part day only



5.1.3 Field Procedure and Sampling Strategy

The field investigations proceeded according to the prescribed methodology of the Code. The sampling strategy consisted initially of a series of 0.5m x 0.5m test excavation squares at 20m intervals following a number of transects along, and perpendicular to, the lines of topography from the elevated knoll to the creekline to examine the nature of the deposit and determine whether Aboriginal archaeological remains are present. The precise positioning and spacing of transects was undertaken with reference to localised disturbance within the areas sampled. Transects were labelled with sequential lettering (A, B, C etc) and pits were identified by their distance in metres along each transect from its origin, as shown in **Figure 21**.

A total of 128 test pits were excavated in this manner along 22 transects, sampling all landforms within the areas of Aboriginal archaeological sensitivity. Several squares initially marked out along Transect X, adjacent to Yarrunga St and between Transects B and C, were not excavated as they were found to be highly impacted and devoid of any remaining original topsoil when grass cover was removed. Transects R, S, T, V and W were extended beyond the original assessed extent of the areas of Aboriginal archaeological sensitivity as it became apparent that levels of historical disturbance along the creekline were not as great in some areas as originally thought. In other areas, test pits confirmed that adjacent market garden areas had no archaeological potential and so further pits beyond the assessed areas of Aboriginal archaeological sensitivity were not considered warranted at these locations.

As discussed in detail below, the majority of initial test pits did not recover evidence of extensive or intact archaeological deposit. However pit C0m, on the western bank of the creekline above the dam, was found to contain considerable numbers of flaked stone pieces that appeared *in situ* and within a much deeper deposit than was evident in other excavated pits. This was labelled the Prestons Creek Bank site and was considered worthy of further investigation to discern its extent and significance. Consequently a 45m x 45m grid was imposed over the area, between pits to the north and west that were found not to contain any archaeological remains, and up to the line and scoured banks of the creekline to the east and south (see **Figure 21** and **Figure 22**). A further nine test pits were excavated in this area, including one pit extending pit C0m, four pits at 5m at cardinal points around pit C0m, and pits north, east and west of pit C20m. In conjunction with pits already excavated along the initial transects, this was enough to delineate the extent of the Prestons Creek Bank site and characterise its contents.



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Figure 21. Test pits excavated during the archaeological investigations.

Areas of Aboriginal Archaeological Sensitivity outlined in blue.



Figure 22. View north-east over grid area around square C0m.

The Prestons Creek Bank site is contained within this area.

At the same time as the proposed Aboriginal archaeological test excavations took place, historical archaeological test excavations under a Heritage Act (1977) s140 permit were conducted within the area of the former Benera Homestead as indicated in **Figure 20** (see MDCA 2015 for a full description of the results of these excavations). The purpose of the historical archaeological investigations was to determine whether any physical remains associated with the homestead had survived within the knoll area. The Aboriginal and historical archaeological test excavations were run in parallel, and due to the possibility for Aboriginal archaeological material to be present within historical archaeological deposits and vice versa, the following procedures were used:

- Within the area of historical archaeological sensitivity, Aboriginal archaeological test excavations were undertaken prior to the commencement of the historical archaeological excavations. These were subject to archaeological monitoring and any features of clearly non-Aboriginal origin were not further investigated. This eventuated in the case of pit F50 in which building rubble was located and no original topsoil deposits remained. No other pits were found to contain more than isolated small European artefacts, which were retrieved for analysis (see below).



- In the event that Aboriginal archaeological remains were located within the area of historical archaeological sensitivity, historical archaeological excavations would not be undertaken in these locations. Isolated or low densities of flaked stone pieces were found in several squares within this area (F90, E20, E40 and H70), though these were not in the specific portion considered most likely to contain remnants of the homestead, and so historical archaeological trenches were easily aligned to avoid these pits.
- The historical archaeological excavations were to cease if any Aboriginal archaeological material was located. *This did not eventuate.*

A total of 137 test pits of 0.5 x 0.5m size were manually excavated across the areas of Aboriginal Archaeological Sensitivity. As discussed in the analysis and results, this has enabled a thorough characterisation of the extent and nature of the Aboriginal archaeological remains within the subject land in general, and the extent and significance of the Prestons Creek Bank site in particular. As per the Code, all pits were excavated by hand. An initial pit (F70) was excavated in 5cm spits to determine the presence of any identifiable stratigraphy and to determine an appropriate spit size for the remaining pits. Having found no discernible stratigraphy, it was determined that the remaining pits would be excavated in 10cm pits to clay subsoil. In several pits, additional spits were excavated into clay subsoil to ensure adequate investigation of burnt roots that had penetrated into subsoil deposits or natural cracking in the clay that had been infilled with overlying soil deposits. Charcoal was found to occur in many pits, usually as a result of burnt roots, and no samples were able to be taken which were in definite association with any archaeological features.

All excavated materials were wet-sieved onsite through nested 2.5mm and 5mm sieves to recover any evidence of past Aboriginal use. A full photographic and written record of the investigations was taken, some of which is reproduced in this report as **Appendix 2**. Locations and levels of all excavated pits were defined by Guy Hazell (Archaeological Surveying and Illustration) to within 10mm in three dimensions (easting, northing, elevation). All excavated pits were backfilled on completion, using a combination of sieve and other local spoil.

Excavated pits are referred to in the following discussion and **Appendix 2** as follows

- Test pits excavated along initial transects are identified by their distance in metres along that transect (e.g. B20 is a 0.5m x 0.5m pit located twenty metres from the origin point of transect B). Where specific spits are discussed, these are added to the end of this designation (e.g. B20 2 and B20 3 are spit 2 and spit 3 of pit B20 respectively).
- The 0.5m x 0.5m test pits within the 45m x 45m grid around pit C0m are identified by their coordinate east and north of the grid origin point, and then by the quadrant (NW, NE, SE or SW) within that 1m x 1m grid location, with an additional designation for spit number at the end (e.g. 20E 10N NW 2 is spit 2 of the 0.5m x 0.5m pit in the northwest quadrant of grid location 20m east, 10m north). All but one pit was excavated in the northwest (NW)



quadrant – this was pit 19E 15N NE which was excavated to adjoin the western section of pit C0m as shown in **Figure 21**.

5.1.4 Retrieved Remains and Analysis Methodology

The archaeological test excavations resulted in the retrieval of flaked stone pieces and several other items of more recent historical origin. The vast majority of the stone artefacts were retrieved from adjacent pits C0m and 19E 15N NE on the western bank of the creek and other nearby pits, however small quantities of flaked stone were retrieved from a number of other excavated pits, most notably around the knoll area and paddock to the west. The significance of this is discussed below.

Stone Artefacts

All of the retrieved stone pieces were subjected to specialist analysis according to the methodologies outlined below.

- dispersed along riverbeds);
- identification of the artefacts;
- interpretation of finished implements among the artefacts, including function and indications of way of life;
- patterns in spatial and chronological distributions within the site;
- age of the site; and
- archaeological/scientific importance of the site.

Specialist stone artefact analyst Emeritus Professor Richard Wright did not visit the excavation, but was provided with the necessary information about the units of soil from which the excavated stone pieces came. Emeritus Professor Wright was familiar with the archaeology of sites south and west of Sydney, having examined assemblages on flaked stone from this area.

The spit was taken as the unit of description using the pit designations described above.

Sorting of the Stone into Artefacts

Stone pieces were initially sorted by rock type and then catalogued according to procedures adapted from those originally published for excavations at the site of Koonalda Cave, on the Nullarbor Plain (Wright, 1971). The procedures were later elaborated (Wright, 1972; Wright, 1994).

Collections from most archaeological sites contain stones that can be grossly divided into:



- definite artefacts (i.e. humanly manufactured stone forms), recognised by the conchoidal fracturing that characterises deliberately flaked glassy, and fine-grained or grainless, stone;
- probable artefacts, rendered probable (but not definite) by the fresh fracturing of a coarse-grained stone; and
- objects which are not flaked or otherwise modified (e.g. a pebble), but which must have been humanly brought to the site (e.g. lumps of unworked ochre in a windblown sand dune); such objects are sometimes called manuports.

Artefacts get accidentally broken during and after manufacture. If an artefact breaks, for example, into three pieces how many artefacts do these three pieces represent? The answer should be one. It is therefore necessary to have a concept of the *minimum number of artefacts* that all the pieces in a collection represent. There are various approaches to this question (e.g. Hiscock 2002).

To arrive at a minimum number, the complete flakes, butts of flakes⁷, finished implements (in this case a single backed blade) and cores were totalled. Restricting to these categories lowers the risk of double counting broken artefacts - a risk that the inclusion of distal flakes would entail.⁸

Examination of Artefact Forms

The 'finished' artefacts were then further examined. They were described using attributes of weight, length, width, thickness and material.

Examination of Edges

Implements can be recognised not only by studying their flaked properties but also by examining the edges of flakes for use-wear. The examination was geared to detect such wear. All pieces were examined under oblique light through x5 magnifying spectacles. Three basic types of use-wear can be recognised

- minute chipping of an edge, due to use in chopping a hard surface;
- striations (scratches) caused by cutting an abrasive material; and
- accumulations of silica, looking like a polish, due to cutting plants rich in silica.

⁷*Butts of flakes* are the parts of broken flakes that carry with them the striking platforms.

⁸*Distal parts* are parts of broken flakes and parts of cores that do not carry with them the striking platform. A broken flake can yield only one butt end, but has the potential for yielding multiple distal parts.



Non-Aboriginal Artefacts

Non-Aboriginal artefacts were located within a number of excavated pits during the Aboriginal archaeological excavations, particularly around the knoll area. These were catalogued (see **Appendix 2B**) and are considered below as evidence of historical disturbance.

5.2 Results of the Test Excavation

The location of excavated squares is shown in **Figure 21** and **Figure 23**. Details of excavated pits are presented in **Appendix 2** and summarised below.

5.2.1 Site Stratigraphy and Integrity

In general terms, the areas of Aboriginal archaeological sensitivity within the subject land were found to retain little or no intact original topsoil horizons, showing clear evidence of disturbance and/or erosion in most pits. This was reflected in the low number of pits containing stone artefacts (34 out of 137) and low densities of artefacts in most of these pits, as described further below. The general profile contained 0-20cm of original A1 or A2 horizon, manifest as an orange/brown loam increasing in clay content with depth and as highly plastic mixed red/brown loam on top of clay subsoil.

Soil samples were taken from several pits along each transect (see **Appendix 2C**), sampling the three distinct soil layers encountered in the majority of pits (brown loam topsoil, highly plastic mixed red/brown loam and uniform red/orange clay subsoil). Pits that contained artefact concentrations or demonstrated a unique soil profile were sampled every 50mm from the surface. All soil samples produced a pH of 5.5 - 7, indicating soils were of neutral to low-moderate acidity. Acidic soils do not create an environment in which organic matter can survive. For example, bone is unlikely to survive in acidic soils for any considerable length of time. It is therefore unsurprising that only very small amounts of organic material such as wood and bone were recovered during the test excavations, and only from recent historical contexts.

The different landform units sampled – knoll, upper/mid slopes and lower slopes/creekbanks – contained typical profiles that reflected the varied nature of historical disturbance and erosional processes, and can be summarised as follows:

Deposit on the knoll

- Pits in close proximity to the site of the former Benera homestead contained evidence of considerable historical disturbance in the form of historical artefacts and fill horizons, and no remaining natural topsoil horizon (**Figure 23**). Artefacts include modern and historic glass fragments, iron nails, ceramic pipe fragments and small pieces of burnt bone, as well as sandstone and brick rubble (see **Appendix 2B**, and see MDCA 2015).



Some fill layers may be contemporary with the use of the homestead, though most represent the spreading of rubble and debris after the homestead burnt down in the 1980s. An example of these profiles from pit F70 is shown in **Figure 24**. Only one artefact was found in these disturbed pits (F90) and this demonstrates the impact of historical activities on parts of the knoll.

- Pits further away from the Benera homestead were characterised by less disturbed profiles. Historical artefacts were less frequent in these pits and largely restricted to the uppermost spit, consistent with spreading across the surface of the knoll from the homestead site rather than significant mixing with natural soil profiles. Nonetheless, these pits contained truncated natural profiles, largely devoid of original humic topsoil (A1) and consisting of an eroded A2 horizon on subsoil clay. Small numbers of stone artefacts were found in several pits, such as H70, a section of which is shown in **Figure 24**. Most however, contained no artefacts and suggest that most evidence of past Aboriginal use of the knoll has been removed by historical disturbance or erosion downslope or did not exist there.

Deposit on the upper and mid-slopes

- Many pits to the east and west of the knoll contained mixed deposit, most likely from market gardening. These were outside of areas noted from the review of aerial photography and demonstrate that some areas were ploughed after use and not detectable from these images. Most pits contained a truncated natural profile with possible remnants of the original A2 horizon, often mixed through ploughing with the underlying clay subsoil. An example from pit B240 is shown in **Figure 24**.
- Small numbers of stone artefacts were located on the upper slopes, primarily to the west of the knoll, with occasional isolated artefacts on the mid slopes to the east of the knoll (see **Figure 26**). Pits containing artefacts comprised truncated profiles with a remnant, eroded A2 horizon overlying clay subsoil, and there was generally less evidence of mixing of soil horizons. An example from pit C120, in which an artefact was found, is shown in **Figure 24**.

Deposit on the lower slopes and creek banks

- With one notable exception, deposit on the lower slopes was found to be similarly truncated, mixed and devoid of artefacts as that further upslope. In addition, areas close to the creekline had been significantly churned from cattle trampling as the section of V140 in **Figure 25** shows.
- In one area up to 40m west of the creek immediately upstream of the dam (the eastern end of Transect T), natural soil deposits were found to be deeper and least disturbed than elsewhere across the subject land. To some extent, these deposits have been masked on the surface by the distribution of a layer of soil derived from recent creek realignment works in the vicinity. However underlying this introduced material is an relatively intact natural profile consisting of 10-20cm of remnant silty loam A1 horizon, which was found to contain considerable numbers of stone artefacts in two pits (see



section of 19E 15N NE and C0m in **Figure 25**). Not all pits with this deeper deposit contained artefacts. For example, pit T120 about 20m west of C0m, illustrated in section in **Figure 25**, and contained no artefacts.

As discussed further below, there is a strong correlation between those pits containing less disturbed profiles, and the presence of Aboriginal stone artefacts. Conversely, very few artefacts were located across the remainder of the subject land, and then only as one to four artefacts in disturbed contexts. The area of the Prestons Creek Bank site, as described and illustrated below, is the only portion of the subject land in which a relatively undisturbed natural profile is present.



Figure 23. Excavated test pits on the knoll.

Historical archaeological test trenches are shown in red and the location of the Benera homestead is outlined in black.

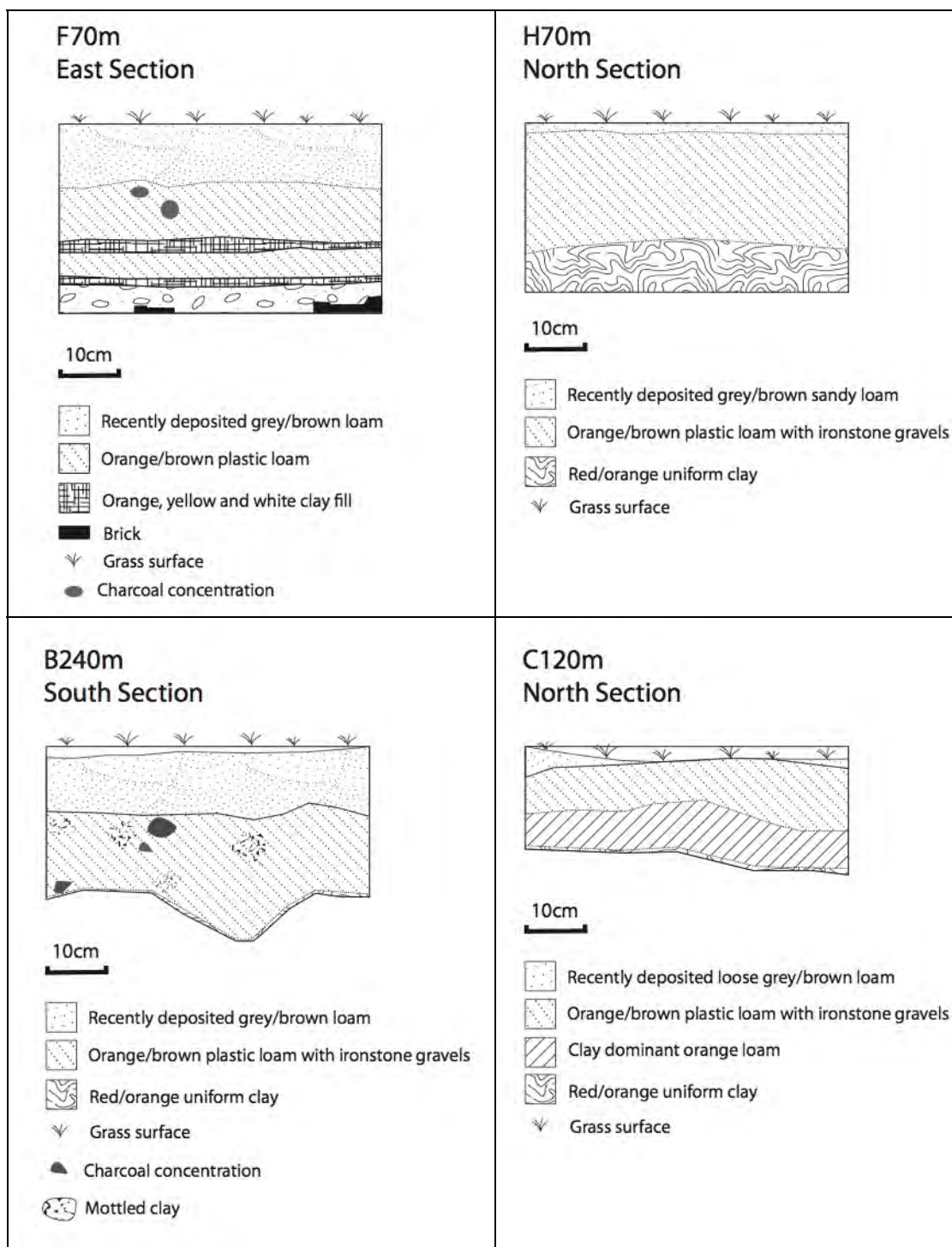


Figure 24. Indicative section drawings from the knoll and upper/mid slopes.

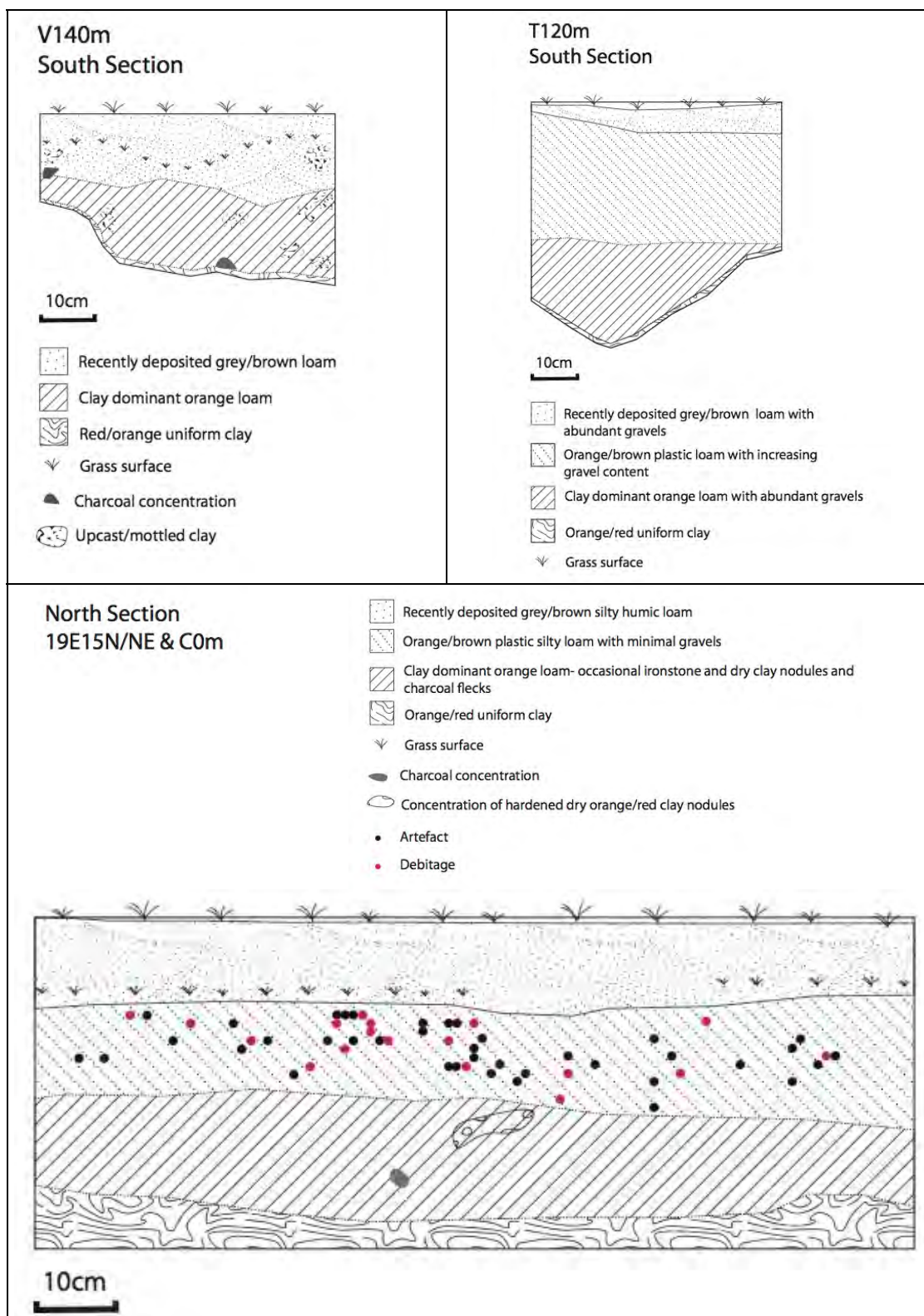


Figure 25. Indicative section drawings from the lower slopes and creek bank.

[Note: in the 19E 15N NE section, only artefacts recorded *in situ* are shown].



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5.2.2 Aboriginal Stone Artefact Analysis

Flaked stone pieces were retrieved from 34 of the 137 test pits excavated within the subject land. The distribution of these pieces is shown in **Figure 26**, from which it can be seen that almost all of the stone pieces were recovered from the Prestons Creek Bank site and the knoll and upper slope to its west. The flaked stone pieces were analysed following the methodology outlined in **Section 5.1.4**. Examples of the artefacts are provided in **Figure 27** and **Figure 28**.

Quantity of Stone Pieces and Raw Materials

A total of 194 pieces of stone were retrieved during the archaeological test excavations. The total numbers of flaked stone retrieved during the archaeological test excavations are shown in **Table 11**, classified according to raw material (the table is in three parts with totals at the end). This shows counts and weights for the 110 pieces that are at least 10mm in one dimension, and were consequently analysed as artefacts. This cut-off point is set deliberately to avoid bias in retrieving minute bits of stone from the sieves. In other words, bias comes about by fluctuating recognition of tiny chips of flaked stone during the sieving process. Nevertheless, the 84 chips recovered were examined and counted. Their counts, and rock types, are listed in the right hand column of **Table 11**.

Without petrographic analysis, the names given to the rock types (with the exception of quartz) reflect flaking properties. By far the most frequent rock types are silcrete and quartz - in about equal numbers.

Generalising about weight is complicated by the presence of a single and massive core of quartzite from unit 20E 40N NW 3 (**Figure 27**). Ignoring this core, the greatest weights are of silcrete, followed by quartz. The comparison of counts with weight indicates that silcrete flaked pieces are on average larger than quartz flaked pieces.



Figure 27. A large core of red quartzite from pit 20E 40N NW 3 (scale in cm).

There is a snap fracture showing along top and some flake scars.

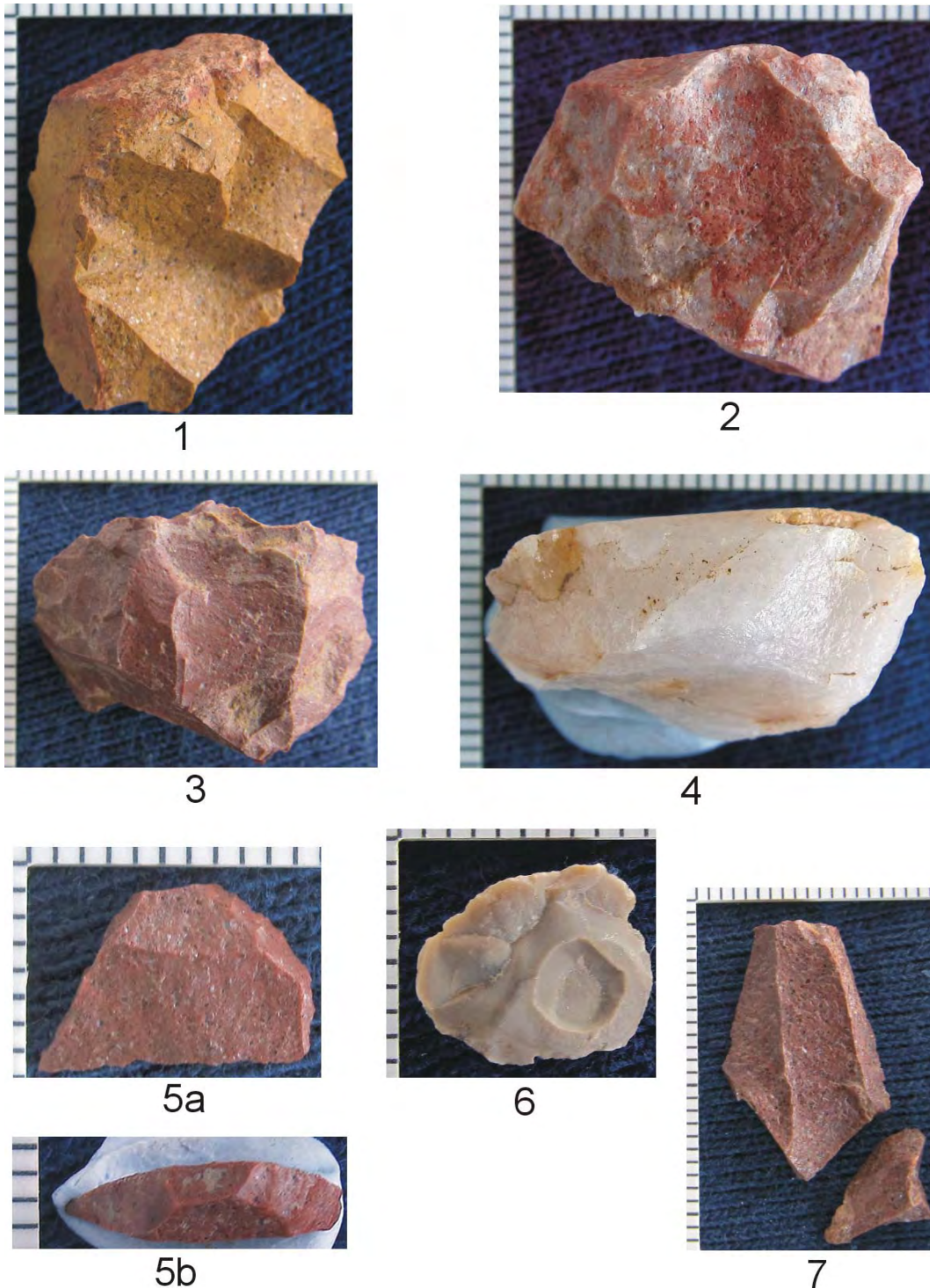


Figure 28. Examples of stone artefacts from the test excavations (all scales in mm).

1 - 3. Worked out cores of silcrete. **4.** A core of quartz. Note the distinct negative flake scar to the right. **5a - 5b.** A crescentic backed blade, of minute size, shown in profile and along its back. **6.** A silcrete flaked piece, with a hollow *potlid fracture* caused by thermal stress. **7.** Two flaked pieces of silcrete, that at first sight looked as if they might join together. Study after excavation showed that there is no actual join preserved between the two pieces.



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Table 11. Flaked lithics and raw materials by count and weight.

Prestons	Silcrete count	Tuff count	Quartzite count	Quartz count	Chert count	TOTAL Flaked Lithics count	Silcrete weight g.	Tuff weight g.	Quartzite weight g.	Quartz weight g.	Chert weight g.	TOTAL Flaked Lithics weight g.	Additional	Chips count		
00E 35N NW 3	1					1	0.2					0.2				
SQUARE TOTAL						1						0.2				
19E 15N NE 1			4			4				1.9		1.9	chips: 1 quartz			
19E 15N NE 2	6		17	1		24	10.7			6.0	0.5	17.2	chips: 30 quartz; 1 tuff; 3 silcrete; 2 chert			
19E 15N NE 3			2			2				0.4		0.4	chips: 3 quartz			
19E 15N NE 4		1	1			2		0.2	0.2			0.4	chips: 1 quartz			
SQUARE TOTAL						32						19.9		41		
20E 10N NW 3													chips: 1 quartz			
SQUARE TOTAL														1		
20E 20N NW 1	1					1	1.8					1.8				
20E 20N NW 3	1	1				2	0.9	0.1				1.0				
SQUARE TOTAL						3						2.8				
20E 40N NW 2		1	1			2		0.4		6.3		6.7				
20E 40N NW 3			1			1			464.0			464.0				
SQUARE TOTAL						3						471				
25E 15N NW 0	1					1	0.1					0.1				
25E 15N NW 1		1				1										
25E 15N NW 3			1			1				0.9		0.9				
SQUARE TOTAL						3						1.0				
35E 35N NW 2	1	1				2	1.4	0.1				1.5				
35E 35N NW 3		1				1		0.1				0.1				
SQUARE TOTAL						3						1.6				
A185 2	1					1	0.2					0.2				
SQUARE TOTAL						1						0.2				
A205 1	1					1	2.6					2.6				
SQUARE TOTAL						1						2.6				
C000 1	1		1			2	0.5			0.5		1.0	chips: 2 quartz; 1 silcrete			
C000 2	14		12			26	17.4			3.7		21.1	chips: 17 quartz			
C000 3	6			1		7	11.9				16.5	28.4	chips: 4 quartz; 3 silcrete			
SQUARE TOTAL						35						50.5		27		
C020 2	1					1	0.9					0.9				
C020 3	3					3	3.5					3.5				
SQUARE TOTAL						4						4.4				

Totals given at end of table



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Prestons	Silcrete count	Tuff count	Quartzite count	Quartz count	Chert count	TOTAL Flaked Lithics count	Silcrete weight g.	Tuff weight g.	Quartzite weight g.	Quartz weight g.	Chert weight g.	TOTAL Flaked Lithics weight g.	Additional	Chips count		
C120 1		1				1		1.6				1.6				
SQUARE TOTAL						1						1.6				
E000 2			1			1				0.8		0.8	chips: 1 silcrete			
SQUARE TOTAL						1						0.8		1		
E020 3													chips: 1 silcrete			
SQUARE TOTAL														1		
E040 1	2					2	0.7					0.7	chips: 1 silcrete			
E040 2				1		1				2.7		2.7				
SQUARE TOTAL						3						3.4		1		
E100 2													non-artefactual ironstone			
SQUARE TOTAL																
F010 2			1			1			3.6			3.6	chips: 1 quartz			
SQUARE TOTAL						1						3.6		1		
F090 2	1					1	1.5					1.5				
SQUARE TOTAL						1						1.5				
G000 1				1		1				0.1		0.1				
SQUARE TOTAL						1						0.1				
H070 2													chips: 3 silcrete			
														3		
J060 1			1			1				0.5		0.5				
SQUARE TOTAL						1						0.5				
J070 1		1				1	0.6					0.6				
SQUARE TOTAL						1						0.6				
M070 1													chips: 1 tuff			
M070 2				1		1				0.9		0.9				
SQUARE TOTAL						1						0.9		1		
M110 2	1					1	0.3					0.3				
SQUARE TOTAL						1						0.3				
M130 1													chips: 1 silcrete			
M130 2	1					1	1.7					1.7				
SQUARE TOTAL						1						1.7		1		

Totals given at end of table



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Prestons	Silcrete count	Tuff count	Quartzite count	Quartz count	Chert count	TOTAL Flaked Lithics count	Silcrete weight g.	Tuff weight g.	Quartzite weight g.	Quartz weight g.	Chert weight g.	TOTAL Flaked Lithics weight g.	Additional	Chips count		
M150 1	1					1	1.4					1.4	chips: 1 silcrete			
M150 2	1					1	1.9					1.9	chips: 2 silcrete			
SQUARE TOTAL						2						3.3		3		
N080 1	1					1	2.8					2.8				
SQUARE TOTAL						1						2.8				
P000 1	1					1	4.0					4.0	chips: 1 silcrete			
SQUARE TOTAL						1						4.0		1		
P060 1				1	1	2				0.3	0.1	0.4				
P060 2	1					1	0.6					0.6				
SQUARE TOTAL						3						1.0				
Q000 1				1		1				0.2		0.2				
Q000 2													chips: 1 silcrete			
SQUARE TOTAL						1						0.2		1		
R070 1													chips: 1 silcrete			
														1		
S040 1	1					1	0.2					0.2				
SQUARE TOTAL						1						0.2				
T080 1	1					1	3.3					3.3				
SQUARE TOTAL						1						3.3				
W160 2	1					1	1.6					1.6				
SQUARE TOTAL						1						1.6				
OVERALL TOTAL	51	8	3	42	6	110	72.1	3.1	467.8	21.5	20.8	585.3		84		

Identifying Artefacts within the Stone Assemblage

Table 12 (in two parts with totals at the end) contains an analysis of the definite artefacts according to which stage of the flaking, or subsequent breakage, or process they represent to calculate the total number of artefacts⁹ from the test excavations. Additional details about the complete flakes are recorded in **Table 13**. Using these principles, it can be concluded that the flaked artefacts excavated at Prestons total at least 36. How many more than 36 artefacts are

⁹ Totalling complete flakes, butts of flakes, finished implements and cores as described in **Section 4.1.4**.



represented in the additional category of distal parts of artefacts (41 pieces) requires attempting to fit distal parts to the 36 undoubtedly individual artefacts. The summary evaluation of these pieces found no such fits. It was thought in the field that there might be a fit between the two items shown as image 7 in **Figure 28**. However work during the analysis of artefacts showed that there was no such fit between these two pieces.

So the actual number of complete artefacts, represented by the excavations at Prestons, is not determined. It is merely known that there are at least 36.

Table 12. Details of artefact forms.

Prestone	Complete Flakes count	Complete Flakes weight g.	Butt Flakes count	Butt Flakes weight g.	Distal Parts count	Distal Parts weight g.	Core count	Core weight g.	Backed blades count	Backed blades weight g
00E 35N NW 3					1	0.2				
19E 15N NE 1	1	1.0			3	0.9				
19E 15N NE 2	6	5.3	3	1.2	16	7.2	1	4.3		
19E 15N NE 3					2	0.4				
19E 15N NE 4	2	0.4								
20E 20N NW 1			1	1.8						
20E 20N NW 3					2	1.0				
20E 40N NW 2	1	0.4					1	6.3		
20E 40N NW 3							1	464.0		
25E 15N NW 0					1	0.1				
25E 15N NW 1					1	0.1				
25E 15N NW 3					1	0.9				
35E 35N NW 2					1	1.4				
35E 35N NW 2					1	0.1				
A185 2					1	0.2				
A205 1					1	2.6				
C000 1	1	0.5	1	0.5						
C000 2	8	2.5	3	1.9	13	4.2	2	11.5		
C000 3	3	16.9			2	2.2	2	9.4		
C020 2	1	0.9								
C020 3			1	0.9	2	2.6				
C120 1					1	1.6				
E000 2					1	0.8				
E040 1	1	0.6			1	0.2				
E040 2	1	2.7								

Totals given at end of table



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Prestone	Complete Flakes count	Complete Flakes weight g.	Butt Flakes count	Butt Flakes weight g.	Distal Parts count	Distal Parts weight g.	Core count	Core weight g.	Backed blades count	Backed blades weight g
F010 2	1	3.6								
F090 2					1	1.5				
G000 1					1	0.1				
J060 1			1	0.5						
J070 1					1	0.6				
M070 2			1	0.9						
M110 2					1	0.3				
M130 2					1	1.7				
M150 1					1	1.4				
M150 2	1	1.9								
N080 1					1	2.8				
P000 1					1	4.0				
P060 1			1	0.1	1	0.3				
P060 2					1	0.6				
Q000 1	1	0.2								
S040 1									1	0.2
T080 1					1	3.3				
W160 2					1	1.6				
OVERALL TOTAL	19	30.2	10	7.5	41	36.2	6	491.2	1	0.2



Table 13. Details of complete flakes.

Units of squares	Weight g.	Length mm.	Width mm.	Thickness mm.	% cortex	Platform width mm.	Platform thickness mm.	Material
19E 15N NE 1	1.0	18.0	10.0	3.5	0	5.5	1.7	quartz
19E 15N NE 2	0.3	11.0	7.0	3.0	0	3.0	2.0	quartz
19E 15N NE 2	0.3	14.0	6.0	1.7	0	3.1	2.1	quartz
19E 15N NE 2	0.2	11.0	6.0	2.1	0	2.7	1.4	quartz
19E 15N NE 2	3.7	23.0	15.0	9.0	0	12.0	5.0	silcrete
19E 15N NE 2	0.2	11.0	7.0	3.5	0	3.0	2.3	silcrete
19E 15N NE 2	0.6	13.0	9.0	7.0	10	6.0	5.0	quartz
19E 15N NE 4	0.2	7.0	1.3	0.4	0	12.0	3.0	tuff
19E 15N NE 4	0.2	12.0	6.0	2.5	0	4.5	2.2	quartzite
20E 40N NW 2	0.4	13.0	10.0	3.0	0	9.0	2.0	tuff
C000 1	0.5	1.2	13.0	2.0	0	6.0	3.0	silcrete
C000 2	0.3	13.0	8.0	2.0	0	7.0	3.0	silcrete
C000 2	0.6	17.0	10.0	4.0	0	3.0	1.5	quartz
C000 2	0.4	21.0	7.0	1.5	5	3.0	1.0	silcrete
C000 2	0.2	12.0	7.0	1.3	0	2.2	1.6	silcrete
C000 2	0.2	10.0	11.0	3.0	0	8.0	3.5	silcrete
C000 2	0.4	11.0	11.0	2.0	0	8.0	2.0	quartz
C000 2	0.1	8.0	10.0	0.5	0	3.0	0.2	silcrete
C000 2	0.3	10.0	10.0	2.0	0	5.0	1.0	quartz
C000 3	0.1	10.0	6.0	0.2	0	5.0	0.2	silcrete
C000 3	0.3	7.0	11.0	3.5	0	5.0	3.0	silcrete
C000 3	16.5	44.0	36.0	11.0	70	21.0	16.0	chert
C020 2	0.9	11.0	19.0	5.0	0	6.0	5.0	silcrete
E040 1	0.6	17.0	9.0	4.0	20	5.5	2.1	silcrete
E040 2	2.7	2.5	22.0	4.7	0	14.0	5.5	chert
F010 2	3.6	20.0	18.0	8.0	0	15.0	8.0	quartzite
M150 2	1.9	21.0	15.0	5.0	0	8.0	3.0	silcrete
Q000 1	0.2	12.0	6.0	3.0	100	3.5	1.0	quartz



Examination of Artefact Forms

The 36 artefacts include eight 'finished' artefacts which are detailed in **Table 14**, with examples shown in **Figure 28**. The micro-blade cores are worked out to a small size, and probably discarded as no longer productive. The tiny crescentic backed blade shows the presence of elements of a Bondaian industry, characterised by its backed blades (see **Figure 28**, images 5a and 5b). This backed blade has a sharp straight edge, and a curved back. The sharp edge is left over from the original sharp edge of the primary flake from which the backed blade is made. The backing is delicately applied to one edge of the blade as a shaping and blunting procedure (Holdaway and Stern 2004; 261-262).

Table 14. Properties of the 'finished' artefacts.

Units of squares	Weight g.	Length mm.	Width mm.	Thickness mm.	Material	Comment
19E 15N NE 2	4.3	25.0	15.0	11.0	silcrete	micro blade core
20E 40N NW 2	6.4	25.0	19.0	16.0	quartz	core
20E 40N NW 3	464.0	121.0	78.0	40.0	quartzite	core - crude
C000 2	4.0	17.0	16.0	11.0	silcrete	core - micro blade
C000 2	7.5	23.0	16.0	16.0	silcrete	core - micro blade
C000 3	5.1	20.0	18.0	14.0	silcrete	core - micro blade
C000 3	4.3	22.0	16.0	11.0	silcrete	core - micro blade
S040 1	0.2	10.0	7.0	2.0	silcrete	backed blade - crescent

Backed blades figure importantly in the literature of Australian archaeology (Mulvaney & Kamminga 1999). They probably served as barbs on spears (for hunting or fishing). To serve their purpose they would have been attached with gummy resin to the wooden point of the spear (McDonald et al., 2007).¹⁰

No bipolar cores are in the collection from Prestons. They have a controversial history of interpretation. Currently they tend to be thought of not as tools in their own right, but as scalar cores - an economical method of obtaining sharp and thin flakes. The relevance of their

¹⁰ Gum could not be expected to survive in the soil, which is repeatedly dried and wetted by rainfall.. Survival of gum requires constantly wet or dry conditions, such as occur in swamps, or in certain deep and dry rockshelters and caves.



apparent absence at Prestons is that this technique is common only in the post- Bondaian period after about 2,000 years ago.

These Bondaian properties of the Prestons industry bear on the age of the deposit. Attenbrow gives a useful summary account of changes in the flaked stone technologies of the local Holocene period (Attenbrow 2006, 196-198).

In summary, the scatter of artefacts from Prestons indicates some slight activity of stone artefact production across most of the investigated area, with the exception of a concentration known as the Prestons Creek Bank site which is discussed below. There are no indications of intensive use of the area as a whole. This is not to say that other activities were not going on in the area excavated. Many activities such as basket making and food processing usually leave no material traces.

Examination of edges

No indications of systematic use wear were identified at Prestons. The edges appear pristine.

Spatial Distribution

Counts in all areas excavated

Can it be assumed that the background distribution of artefacts is evenly spread across the area sampled by the excavations?

The distribution of flaked artefacts and chips per excavated pit is shown in **Figure 26**. This shows that there is a sparse distribution of artefacts over virtually all the area excavated, with the majority of pits yielding no artefacts at all. Two areas within the subject land contain almost all of the retrieved stone pieces.

The first, and most striking of these is the high frequency of flaked artefacts and chips in the pits down by the creek, in particular C0 and 19E 15N NE (but also including pits C20, 20E 10N NW, 20E 20N NW, 20E 40N NW, 25E 15N NW and 35E 35N NW). Together these form a spatially discrete concentration of artefacts that together account for 75.5% of all of the flaked artefacts retrieved during the test excavations and 82.1% of all of the chips. This site has been labelled the Prestons Creek Bank site as shown in **Figure 30**.

The second area of note comprises the pits on and to the immediate west of the knoll area (transects E, F, G, J, M, N, P, and Q). Though this area only contains dispersed and low densities of stone artefacts, there were virtually no artefacts found outside of this area except those within the Prestons Creek Bank site.



Comparison between the Prestons Creek Bank site and the Knoll area

Some further statistical tests were undertaken on the artefacts from the eight pits comprising the Prestons Creek Bank site, and those from the pits around the knoll and immediate western slopes as described above. Specifically, two statistical studies were carried out on the differences between the totals for of rock types and artefact forms between these two areas.

In relation to rock types, the following contingency table was analysed using the statistical packages PAST and XLSTAT:

	Silcrete	Tuff	Quartzite	Quartz	Chert
Creek Bank	35	6	2	38	2
Knoll	10	1	1	3	4

The null hypothesis is that there is no difference between the frequencies of rock types in the two areas. The Monte Carlo method of computing the probability of no difference shows

$$p = 0.0154.$$

The null hypothesis can therefore be rejected, and it can be concluded that there is a statistically significant difference between rock types in the two areas. However the Contingency Coefficient is a low 0.342, which indicates that the difference is slight.

Examination of the Adjusted Residuals shows that the significant differences are concentrated in:

- an unexpectedly high frequency of chert in the Knoll area, coupled with an unexpectedly low frequency of chert in the Creek Bank site;
- an unexpectedly high frequency of quartz in the Creek Bank site, coupled with an unexpectedly low frequency of quartz in the Knoll area.

In relation to the forms of the artefacts, the following contingency table was analysed using the statistical package PAST:

	Complete	Butt	Distal	Core
Creek Bank	23	9	45	7
Knoll	5	3	12	0

The null hypothesis is that there is no difference between the forms of the artefacts in the two areas. The Monte Carlo method of computing the probability of no difference shows

$$p = 0.6158.$$

The null hypothesis can therefore be accepted, and it can be concluded that there is no statistically significant difference between forms of the artefacts in the two areas.



In conclusion these statistical studies show that there are slight differences between the frequencies of rock types at the Creek Bank site and the Knoll areas. Unfortunately the disturbed and truncated condition of the deposits on the knoll make it impossible to determine if these differences reflect actual differing usage by Aboriginal people in the past or are merely a factor of poor preservation. The latter appears more likely given that there is no statistical difference between the forms of the artefacts.

Vertical Distribution

Artefacts are too infrequent over the area as a whole to determine changes in frequency with depth excavated. This includes across the knoll area, and in most of the pits comprising the Prestons Creek Bank Site. However, within the Prestons Creek Bank site, the high density of artefacts in pits C0 and 19E 15N NE warrants further investigation. To do this Peter Bones' three-dimensional rotation program Lines3D was utilised, into which are entered (for each flaked artefact and chip) the surveyed coordinates of northings, eastings, and depth.¹¹ Obviously these coordinates are available only for those flaked artefacts and chips that we spotted during excavation, and not those that were subsequently found in the sieves. So their totals are less than those reported in **Table 11** for pits C0 and 19E 15N NE.

The results of the analysis by program Lines3D are shown in **Figure 29**. The upper part of the diagram shows a conventional view in plan of the distribution of flaked artefacts and chips. North is to the top. The program then rotates the artefacts and chips, so that they are seen in section, with a view from the south. Two conclusions emerge from this 3-D analysis. In both plan and section, the flaked artefacts and chips are intimately mixed up with each other. They form a relatively discrete band through this area of the site.

Origin of Stone Used for Flaking

Pieces of stone were examined for cortex, which is the original outer surface of the stone used for flaking. Cortex was uncommon, but its presence nevertheless indicates that stone was being derived from river or beach pebbles. The remainder of the artefacts, that do not show cortex, may therefore represent pieces that were flaked off cores after cortex had been flaked away. There are no indications of stone that was directly hammered out of a quarry of *in situ* rock. Overall, the diminutive size of the cores suggests that stone for flaking artefacts was relatively scarce in the area of Prestons.

¹¹ Lines3D is incorporated into RVS Wright's forensic package Bodies3D, which can be downloaded from the Smithsonian site <http://osteoware.si.edu/forum/osteoware-communityannouncements/bodies3d-richard-wright-0>

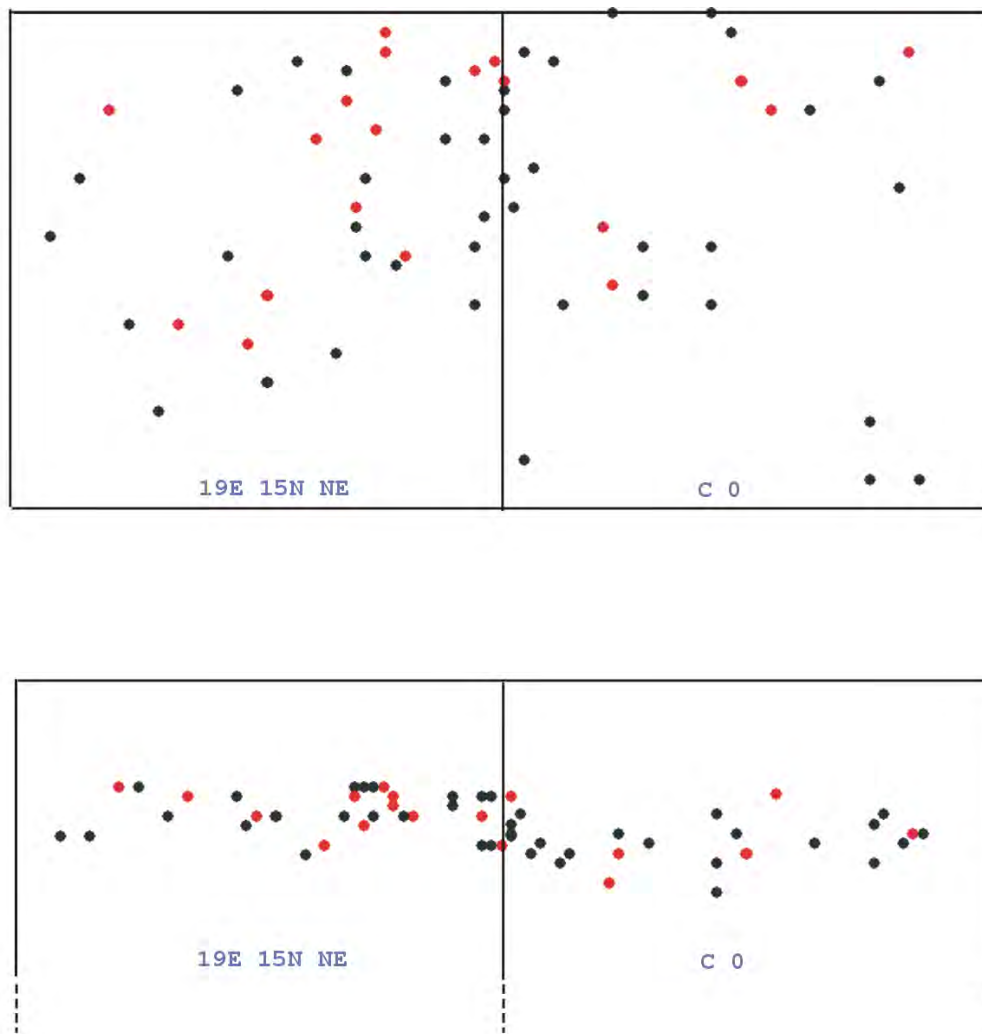


Figure 29. Distribution of flaked artefacts and chips in pits C0 and 19E 15N NE.

The upper image is a plan view and the lower is a section view. Black points are the artefacts, red points the chips off artefacts. Only those artefacts recorded *in situ* are depicted.

Site Taphonomy

In this section site taphonomy is considered, which means looking at the processes that have affected the stone artefacts after their abandonment at the site. The potential processes to be considered include abrasion by wind (common near sand dunes), natural chemical corrosion in the soil, evidence that the artefacts were *in situ* while soil processes developed, cracking by fire, damage to edges by trampling, and bioturbation in general.¹² With one exception,

¹² Bioturbation includes disturbance to the artefacts by such living factors as earth worms and roots.



examination of the artefacts from Prestons reveals no clear evidence of damage by taphonomic processes. The pieces are in a pristine condition.

The exception is a single artefact that shows what is known as a *potlid fracture*. **Figure 28**, image 6 shows the depression left by this potlid fracture. These fractures are caused by sudden stress to the stone by fire. It cannot be determined whether this was caused during occupation at the site or by late natural fires passing over the site.

It is concluded therefore that the deposits from which the artefacts come are virtually undisturbed. However, it is also assumed that even slight bioturbation will have destroyed micro-associations between artefacts.

A study of what bits of stone fit together can throw more light on the question of lateral and vertical movement of artefacts after abandonment. This study is known in archaeology as one of *conjoins*. A summary examination of the artefacts revealed no conjoins. The taphonomic indications of lack of disturbance did not warrant the major time required to compare each artefact, of a specific rock type, with all others of that rock type.

Age of the Site

No radiocarbon dates are available for Prestons. The artefacts in the upper levels are consistent with a late Holocene age - very roughly some time in the last 4,000 years. (Attenbrow, 2006; 196-198). The absence of bipolar cores (discussed above) suggests an age in the first part of that 4,000 year age bracket.

Conclusions

The archaeological importance or significance of an artefact assemblage can be evaluated by four factors:

- sheer numbers of artefacts;
- specially rare quality of a few artefacts;
- special associations of artefacts (e.g. a single event around a fireplace)
- provision of rare insights into daily life

Based on the above analysis the artefacts from the majority of the subject land do not meet any of these four requirements. Overall, the stone artefact assemblage very much reflects the kinds of evidence found in Holocene soils in the Sydney area. It is noted though that such evidence has rarely been preserved *in situ* even in contexts of minimal disturbance. Therefore, the conservation and scientific value of undisturbed sites is high even when artefact numbers



are relatively moderate and site distribution/lateral and vertical extent is limited or concentrated.

With this in mind, it is observed that there are some archaeologically challenging properties in the distribution of artefacts over the whole studied area. Most of the excavated squares contain virtually nothing in the way of artefacts. Yet there is an exceptional concentration of artefacts in the adjacent squares C0 and 19E 15N NE, which are down by the creek, and which together with the adjacent pits form the Prestons Creek Bank site (see **Figure 30**).

In this location there are miniscule cores, with the flaking debris showing this is an in situ working floor. This combination indicates the survival of undisturbed flaking activity at the spot. The areas so far sampled by the creek provide an indication of the activities undertaken in this location, and it is assumed that further evidence remains within the defined extent of the Prestons Creek Bank site area surrounding pits C0 and 19E 15N NE.



6.0

Analysis and Discussion

6.1 Aboriginal Objects within the Subject Lands

The archaeological test excavations detailed above have resulted in the identification of Aboriginal archaeological remains in the form of flaked stone artefacts at a number of locations within the subject lands, as illustrated in **Figure 30**. Specifically, a total of 194 pieces of flaked stone and chips were recovered from 34 out of a total of 137 excavated test pits. The vast majority of these artefacts were found within an approximately 25m x 50m area on the western side of the creek above the dam. This has been defined as the Prestons Creek Bank site, as discussed further below.



Figure 30. Documented Aboriginal archaeological remains within the subject lands.

Black squares represent excavated pits containing flaked stone pieces. Blue outline denotes maximum assessed extent of the Prestons Creek Bank site.

Outside of the Prestons Creek Bank site, only one or two (and occasionally up to four) flaked stone pieces were located in some excavated pits, almost all of which were on the knoll and upper slopes to the west of the knoll (see **Figure 26**). Across these areas and the remainder of the subject land outside of the Prestons Creek Bank site, abundant evidence of historical



disturbance was documented, and many excavated units (spits) containing stone artefacts also contained introduced historical materials. As a result of this, the natural soil profiles were found to be highly truncated and/or disturbed, and it is therefore not surprising that low numbers of stone artefacts were retrieved.

In summary (see **Figure 30**) the excavated squares to the west and south of the Benera Homestead contained minimal archaeological evidence and, in usually disturbed contexts.

6.1.1 The Prestons Creek Bank site

A total of eight test pits were excavated within the Prestons Creek Bank site. Together these accounted for 75% of all stone pieces retrieved during the excavations. The boundaries of the site have been defined in part by topography, the nature of the deposit and the artefact content of the excavated pits. Specifically, it extends north and west to areas known to contain no artefacts or disturbed deposit, and to the east and south to the line of the creek and its scoured banks respectively (**Figure 31**).

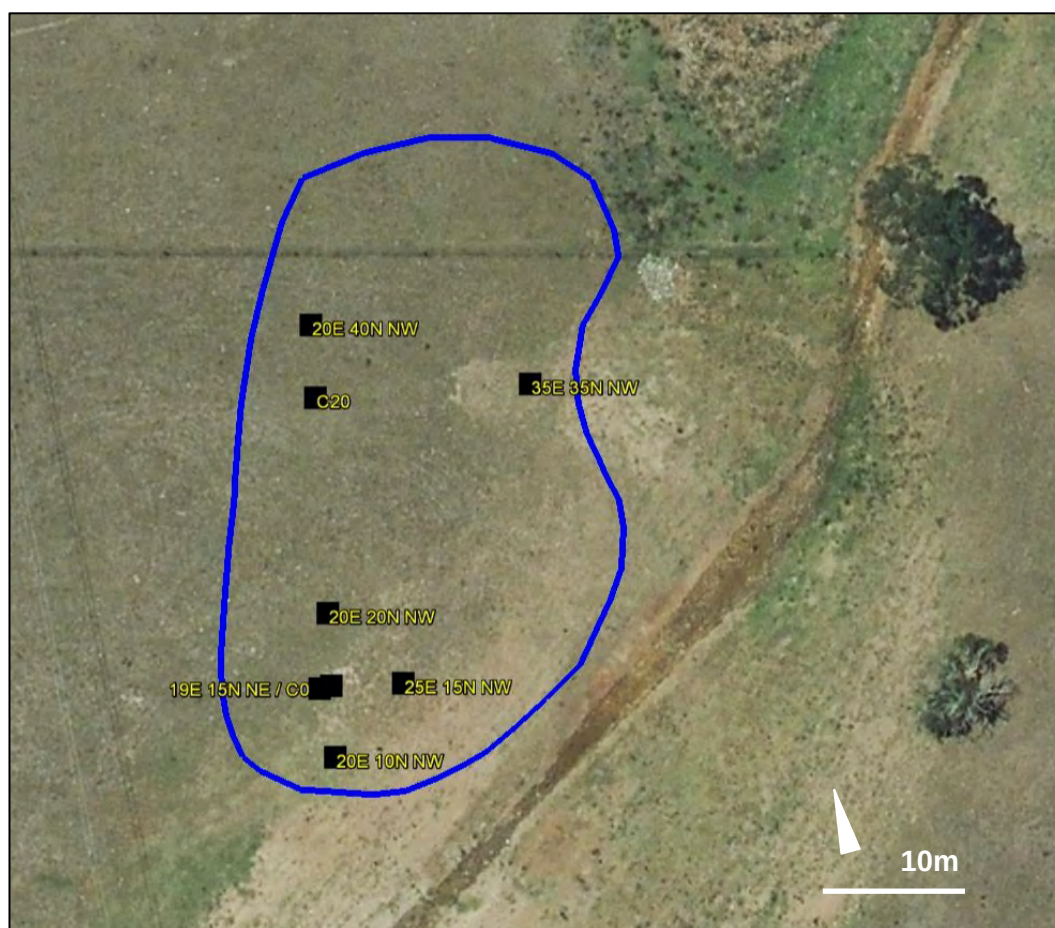


Figure 31. Defined extent of the Prestons Creek Bank site.

Excavated pits shown and those which contained stone artefacts.



The Prestons Creek Bank site is small in terms of total maximum area, but contains at least one well-preserved knapping event (centred around pits 19E 15N NE / C0). These pits, with a combined area of 0.5m², contain 135 stone pieces (67 flaked stone pieces and 68 chips). This indicates an artefact density of in excess of 200 artefacts per square metre, which is significant in comparison to other archaeological excavations in the local area, and far greater than predicted according to stream order modelling on the northern Cumberland Plain, as reviewed above. The stone assemblage contains a lesser range of raw materials and lower proportion of finished implements to other knapping areas investigated in the local area. However it is noted that the site is in very good condition and that only a very small portion of the total site area has been excavated. Given the high densities of artefacts present, this suggests that further knapping events, or extensions of existing documented evidence may occur within the immediate area of the site.

6.1.2 Overall Aboriginal Use of the Subject Land

The archaeological evidence uncovered so far within the subject land provides little specific information about how the area as a whole was used by Aboriginal people, largely due to the abundant evidence of historical disturbance. It was suggested (see above) that the knoll area may have been used for ceremonial activities more than day to day activities due to its prominent location. While on the one hand the ceremonial use of the knoll is likely to be impossible to discern archaeologically, the presence of stone artefacts at this location indicates that it was used at some point in the past for more secular activity. In particular, the presence of debitage suggests that stone artefact manufacture took place on the knoll, although it does not appear that the area was intensively used.

Notwithstanding the role of historical disturbance and erosion, the absence of archaeological remains on the hillslope areas, particularly to the east of the knoll is considered to be a broad reflection of the lack of past Aboriginal use of these areas. Similarly, the presence of a dense concentration of stone artefacts within the Prestons Creek Bank site, but not at other points along the creekline, suggests that this site reflects a focus of Aboriginal use in the past. Why this particular location along the creekline was chosen is not clear, however there is also no evidence that the site represents repeated or long-term occupation. It could be envisaged that Aboriginal people moved into the subject land along the low ridgeline ending at the knoll, and used this area on occasion. The Prestons Creek Bank site was more intensively used, probably because of its proximity to fresh water. It is also possible that other sites demonstrating intensive occupation could be located there.



6.2 Significance Assessment

6.2.1 The Assessment of Significance

The archaeological or scientific significance of Aboriginal objects can be assessed using criteria set out in The Australia ICOMOS *Burra Charter* 1999 (see Marquis-Kyle & Walker 2004). It is related to the rarity, quality and representativeness of the object being assessed at local, regional and potentially national scale. It should also consider whether the object can contribute substantial additional scientific information. Part of this consideration is whether the Aboriginal objects display no significant post-deposition disturbance. Scientific significance is one element of cultural significance along with aesthetic, historical and social significance and does not have primacy over these other aspects.

Significance assessment of Aboriginal archaeological sites and areas of land is based on three broad criteria. Namely, that they are important to:

- the scientific community for their potential research value.
- the general public for their educational and broader heritage value.
- the Aboriginal community for cultural reasons and historical associations.

With respect to Aboriginal community significance, all Registered Aboriginal Parties consulted during this study were specifically asked to provide and/or discuss any Aboriginal cultural or historical information relating to the subject land which they felt was pertinent to the assessment of Aboriginal heritage significance in relation to the current development proposal. No specific information (e.g. about historical Aboriginal associations with the area) has been presented during this consultation to suggest that the subject land retains any specific or especial significance to the local Aboriginal community. The significance of the Prestons Creek Bank site specifically, has also been considered by the Registered Aboriginal Parties in their review of the draft version of this report and while no information about the site has been provided, it is clear from support for the preservation of the site that it has some significance to Aboriginal people as a surviving trace of past Aboriginal use of the area.

The scientific and public significance of the site are considered together as they are related. The seven criteria on which the following Statement of Significance is based are summarised below:

- Criterion (a) is important in the course, or pattern, of NSW's cultural or natural history;
- Criterion (b) has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;



- Criterion (c) is important in demonstrating aesthetic characteristic and/or a high degree of creative or technical achievement in NSW;
- Criterion (d) has strong or special association a particular community or cultural group in NSW for social cultural or spiritual reasons;
- Criterion (e) has potential to yield information that will contribute to an understanding of NSW's cultural or natural history;
- Criterion (f) possess uncommon, rare or endangered aspects of NSW's cultural or natural history;
- Criterion (g) is important in demonstrating the principal characteristics of a class of NSW's cultural places or natural environments.

6.2.2 Application of Significance Criteria

- Criterion a: The Prestons Creek Bank site contains evidence that helps to create a better understanding of the Aboriginal use of the southern Cumberland Plain, in particular how this use may differ from the northern plain which has been the focus of more intensive archaeological research in the past. However neither it, nor the other archaeological remains across the subject land could be considered especially important to the cultural history of NSW.
- Criterion b: Aboriginal community responses indicate that the area in general retains significance culturally and historically to local Aboriginal people. With respect to the subject land in particular, no specific or especial significance has been argued to exist beyond that latent in the general area.
- Criterion c: n/a
- Criterion d: n/a
- Criterion e: For the reasons outlined above, the Prestons Creek Bank site has the potential to provide information that will allow a better understanding of how Aboriginal people used the south-western Cumberland Plain in the past. At a time when this region is under considerable pressure from development impact, this is especially important. While the Prestons Creek Bank site is not unique in the broader surrounding area, it contains a different type of evidence to many other campsites (e.g. higher artefact density but less raw materials and implements). The site therefore has potential to yield information that will help further understanding of the use of south-western Sydney by Aboriginal people as part of a broader mosaic of Aboriginal



responses across NSW. The archaeological remains outside of the Prestons Creek Bank site have no such potential due to their disturbed and dispersed nature.

- Criterion f: As noted above, the Prestons Creek Bank site does not contain particular types of evidence that are not documented in other Aboriginal sites in the local area and region, however it reflects a particular type of usage that does not appear to be well represented and preserved locally, wherein high densities of artefacts but low range of raw materials and low numbers of formal implements are in evidence. As a whole this evidence could be considered locally rare, but in terms of conservation values it could be considered high, as few relatively intact sites of this nature have been preserved in the local landscape.
- Criterion g: n/a.

6.2.3 Summary Statement of Aboriginal Cultural Heritage Significance

Outside of the Prestons Creek Bank site, evidence of the Aboriginal occupation of the subject land is limited in extent and dispersed and disturbed in nature. It is not considered to be of *archaeological* significance, and has no capacity to provide information beyond that already gathered, that will assist in furthering our understanding of the use of the area by Aboriginal people in the past. The knoll area has been shown to have been used occasionally by Aboriginal people for the manufacture or repair of stone artefacts. This does not preclude its use (either contemporary or at other times) for ceremonial purposes, but by the same token there is little to suggest that the knoll had particular significance for Aboriginal people in the past.

The Prestons Creek Bank site represents an area used more intensively by Aboriginal people in the past, though perhaps not repeatedly or over long periods. It may represent knapping that struggled to produce viable flakes, or which was occurring some distance from stone sources. The site contains high densities of stone artefacts by local standards, though a lesser range of raw materials and lower proportion of formal implements than has been documented at other knapping floors in the local area. Because of these differences, the Prestons Creek Bank site has some local significance as representing a facet of the Aboriginal use of south-western Sydney that is relatively poorly documented at this stage. The fact that the site (artefacts and context) is in very good condition and most likely contains further archaeological evidence adds to this significance. For this reason the Prestons Creek Bank site is considered to have high conservation value on a local and regional (south-western Cumberland Plain) level.



7.0

Aboriginal Heritage Management

The current industrial development proposal involves considerable bulk earthworks which would totally impact any Aboriginal archaeological remains within these areas. A current proposed is shown in **Figure 3**. In the context of these potential impacts, management of the Prestons Creek Bank site and the archaeological remains across the rest of the subject land have been considered separately.

7.1 The Prestons Creek Bank site

7.1.1 Potential Development Impacts

As initially conceived, the proposal would have resulted in impacts to the Prestons Creek Bank site through bulk earthworks and the construction of buildings and service infrastructure. However due to the assessed significance of the Prestons Creek Bank site, it has been agreed that the site will be preserved in an area proposed for passive recreation within the Prestons Warehouse and Distribution Estate.

7.1.2 Proposed Management

The fully defined extent of the Prestons Creek Bank site (see **Figure 30**) is proposed to be preserved within the context of the proposed development. A concept plan for the possible use of this area is provided in **Figure 32**. The recreation area proposed to host the preserved site is between the proposed Warehouses 3 and 4 and the proposed carpark to the west of these buildings. It is also proposed to install a concrete box culvert around the western and northern edges of the recreation area to manage stormwater flows across the property. It is also acknowledged that some additional flows across the recreation area may result in the event of a 1:100 year flood event.

The following actions will be required in order to appropriately protect and manage the Prestons Creek Bank site in the context of the current proposal:

- The presence of the Prestons Creek Bank site, and the legal protections afforded to it under s86 of National Parks & Wildlife Act 1974, should be incorporated into any other relevant management plans (e.g. Landscape Plan) for the recreation area and other surrounding features, so as to prevent inadvertent impacts to ensure consistency of operations of the different planning instruments.
- The presence of the Prestons Creek Bank site should be noted as a covenant on the eventual title of the relevant allotment on completion of the construction works for the



warehouse and distribution estate. This was specifically supported by the CBNTCAC in their response to the draft report (see **Appendix 1C**).

- The Prestons Creek Bank site should be registered on the AHIMS Aboriginal Sites Register as an Aboriginal site.
- The full extent of the site will need to be actively protected during construction works through:
 - Formulation of suitable construction methods for the proposed adjacent warehouse facilities, carpark and stormwater infrastructure that will prevent surface or subsurface impacts within the defined extent of the Prestons Creek Bank site; and
 - Erection of protective fencing to prevent access to the Prestons Creek Bank site for the duration of construction activities.
- An Aboriginal Heritage Management Plan will need to be prepared for the site at Construction Certificate stage (i.e. once a final approved development layout is known). The plan should be formulated in consultation with representatives of the Registered Aboriginal Parties to the current project and should address:
 - initial protective measures to be undertaken to ensure the ongoing survival of the site (e.g. potentially covering the extent of the site with geofabric, soil and turf);
 - permissible plantings and structures within the recreation area and appropriate methods for their installation;
 - derive an appropriate location for the reburial of Aboriginal stone artefacts retrieved during the current investigations (i.e. within the recreation area but outside of the documented extent of the Prestons Creek Bank site);
 - determine appropriate content and placement for interpretive materials within the recreation area that document the past Aboriginal use of the subject land;
 - permissible and recommended regular maintenance activities within the recreation area;
 - permissible activities within the recreation area; and
 - recommended periodic review of the Management Plan (e.g. every 5 years) to ensure that the plan continues to protect the site and allow the recreation area to be used appropriately.



Aboriginal Cultural Heritage Assessment Report

Yarrunga St, Prestons NSW

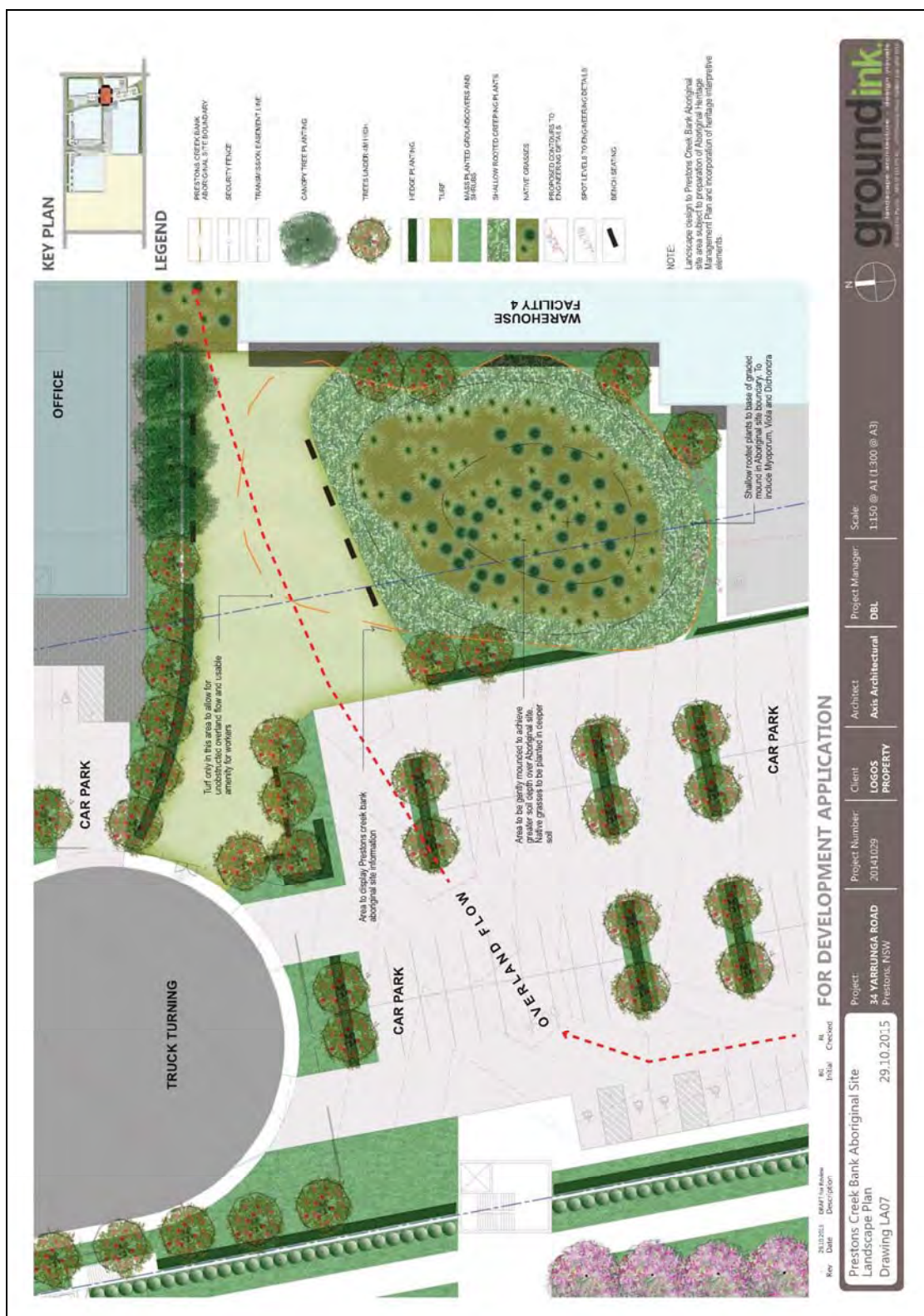


Figure 32. Initial concept plan for the use of the recreation area containing the Prestons Creek Bank site.



7.2 Remainder of the Subject Land

7.2.1 Potential Development Impacts

Outside of the Prestons Creek Bank site, the proposal would result in total impacts to all soil horizons that may contain Aboriginal archaeological remains within the subject land (see **Figure 3**). Given the sloping topography of the subject land, the large scale of the proposed warehouse facilities requires considerable reshaping through bulk cut and fill earthworks, such that all areas are likely to be impacted.

Table 15. Impact assessment table

Site	Type of Proposed Harm	Degree of Proposed Harm	Consequence of Proposed Harm
Yarrunga St Prestons	Direct	Total	Total loss of value

7.2.2 Potential Mitigative Measures

Avoidance of harm to identified Aboriginal objects is the preferred and first option considered in Aboriginal cultural heritage assessment. However, as the current archaeological investigations have clearly shown, outside of the Prestons Creek Bank site, archaeological remains consist of isolated or very low density sparse manifestations of stone artefacts, generally in association with evidence of historical disturbance. There is therefore no archaeological justification for preservation or further investigation of the archaeological remains across the remainder of the subject land.

Furthermore, the impacts from construction of the current proposal will be partially offset by the retention of the sample of artefacts retrieved during the current excavations, the information that they have provided, and the opportunity described above to create an interpretive display about the Aboriginal use of the subject land within the recreation area which will protect the Prestons Creek Bank site.

It is noted that in the response of the Liverpool City Council Aboriginal Consultative Committee to the draft recommendations (see **Appendix 1C**), monitoring of bulk earthworks and collection of any identified artefacts has been recommended for areas outside of the Prestons Creek Bank site. Given the extremely low densities of artefacts recorded across the subject land, this is not considered practical nor warranted on archaeological grounds. It is unlikely that many artefacts would be identified and retrieved, and they would have no archaeological context. The preservation of the Prestons Creek Bank site and reburial and interpretation of stone artefacts already retrieved during the archaeological test excavations, is considered to



adequately offset the proposed impacts to a relatively small, dispersed and largely disturbed number of artefacts across the remainder of the subject land.

7.2.3 Proposed Management

The following measures are proposed in relation to the management of the Aboriginal archaeological remains within the subject land outside of the Prestons Creek Bank site:

- The artefacts retrieved during the current investigations should be reburied within the recreation area containing the Prestons Creek Bank site as outlined above in relation to the Aboriginal Heritage Management Plan for that site.
- The findings of the current investigation in relation to the archaeological remains should form part of the interpretation strategy outlined above in relation to the Aboriginal Heritage Management Plan for the Prestons Creek Bank site.
- The archaeological remains should be registered on AHIMS and the recorded updated to reflect the impacts to the site from construction, once this is completed.



8.0

Recommendations

The following recommendations are based upon:

- the legal requirements and automatic statutory protection provided to items of Aboriginal heritage under the terms of the *National Parks and Wildlife Act of 1974 (as amended)*, where it is an offence to knowingly or unknowingly harm an Aboriginal object; and
- the results of the current study which are documented in this report; and
- the views and concerns of the Registered Aboriginal Parties to the current assessment, as discussed in **Section 2** and documented in **Appendix 1**.

It is recommended that:

1. The Prestons Creek Bank site, as outlined in **Figure 31**, be managed for preservation, through incorporation into a grassed recreational area within the Prestons Warehouse and Distribution Estate.
2. The Prestons Creek Bank site be protected from impacts during construction works through the placement of protective fencing to prevent access to the area.
3. An Aboriginal Heritage Management Plan be prepared for the preservation and conservation of the Prestons Creek Bank site at Construction Certificate stage, outlining short, medium and long term management requirements for the preservation of the site and permissible use of the area containing the site, once a final approved development layout is known. The Aboriginal Heritage Management Plan should be prepared by a suitably qualified Aboriginal heritage consultant in consultation with representatives of the Registered Aboriginal Parties to the current project. It should be cross-referenced in other relevant plans (e.g. Landscape Plan) to maximise the protection of the Prestons Creek Bank site. The Plan should provide a strategy for the reburial of the stone artefacts recovered during the current investigations, and a plan for the interpretation of the Aboriginal heritage of the area, potentially as some form of display with the reserved recreational area containing the Prestons Creek Bank site.
4. The presence of the Prestons Creek Bank site should be noted as a covenant on the eventual title of the relevant allotment on completion of the construction works for the warehouse and distribution estate.
5. Provided that *Recommendations 1, 2, 3 and 4* above are undertaken, there are no Aboriginal *archaeological* constraints to the current proposal and no further *archaeological* works are considered warranted within the subject land.



6. There are no archaeological grounds to prevent development impacts to Aboriginal archaeological remains within the subject land outside of the area of the Prestons Creek Bank site (as shown in **Figure 31**). Accordingly, permission should be granted to allow impacts to all such areas that are proposed for development impact.
7. An AHIMS site record should be submitted to the AHIMS Registrar for the Prestons Creek Bank site and for the other Aboriginal archaeological remains within the subject land outside of this area.
8. On completion of impacts to the Aboriginal archaeological remains outside of the Prestons Creek Bank site, an Aboriginal Site Impact Form should be submitted to the AHIMS Registrar to reflect these impacts.
9. One copy of this report should be forwarded to all Registered Aboriginal Parties and the AHIMS Registrar:

The Manager
Aboriginal Heritage Information Management System
NSW Office of Environment and Heritage
P.O. Box 1967
Hurstville NSW 2770



9.0

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APPENDIX 1

ABORIGINAL COMMUNITY CONSULTATION RECORDS

APPENDIX 1A : Public & Direct Notice and Responses

APPENDIX 1B : Information and Methodology Mailout and Responses

APPENDIX 1C : Responses to Draft Report



APPENDIX 1A : Public & Direct Notice and Responses

12 May 2015

ATTN: Planning Greater Sydney Region
Office of Environment and Heritage
PO Box 644
PARRAMATTA NSW 2124

Dear Sir/Madam,

**RE: NOTIFICATION OF ABORIGINAL PEOPLE IN RELATION TO ABORIGINAL
ARCHAEOLOGICAL INVESTIGATIONS AT LOTS 20, 33, 34, 35 & 43 DP2359 ON YARRUNGA
STREET, PRESTONS NSW**

Proponent: Logos Development Management Pty Ltd [Suite 2, Level 12, 167 Macquarie Street
Sydney NSW 2000]

Logos Development Management Pty Ltd is proposing to undertake Aboriginal archaeological investigations within Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW. These investigations will be undertaken under the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. The proponent has engaged MDCA [Mary Dallas Consulting Archaeologists] to coordinate Aboriginal community consultation as required by National Parks and Wildlife Regulation 2009 (Clause 80C).

Accordingly we are contacting you, as per the above regulation, to seek the names and current contact details of any Aboriginal people of whom you are aware may hold cultural knowledge relevant to determining the significance of Aboriginal objects at this location, such that we may notify them directly about the proposal.

Please forward the details of any such Aboriginal people in writing before Wednesday 27th May 2015 to MDCA at:

POST

PO BOX A281
Arncliffe NSW 2205

FAX

(02) 8520 2006

EMAIL

admin@mdca.com.au

Please ensure that you provide us with current postal addresses and contact names. Any enquiries should be directed to Tamika Goward on 0488999452 or our office on 02 4465 2546.

Yours sincerely,



Tamika Goward

Mary Dallas Consulting Archaeologists



Office of Environment & Heritage

Our reference: SF15/1617

Tamika Goward
Archaeologist
Mary Dallas Consulting Archaeologists
PO Box A281
ARNCLIFFE, NSW 2205

Dear Tamika,

Thank you for your letter dated 12 May 2015 to the Office of Environment and Heritage (OEH) regarding obtaining a list of the Aboriginal stakeholders that may have an interest in Lots 20, 33, 34, 35 and 43 DP2359 at Yarrunga Street, Prestons, NSW (Liverpool LGA).

Before making an application for the issue of an Aboriginal Heritage Impact Permit, the applicant must carry out an Aboriginal community consultation process in accordance with the National Parks and Wildlife Regulation 2009 completed to the stage described in subclause 80C.

Please find attached the list of Aboriginal stakeholders known to OEH that may have an interest in the project. OEH's list of regional stakeholders is a list of groups, organisations or individuals who may hold cultural knowledge relevant to a proposal in a region. Contact details are correct as at the time of registration. Consultation with Aboriginal people should not be confused with employment. Inclusion on the OEH's list is not an automatic right to employment. It is the decision of a proponent on who they choose to engage to deliver services based on a range of considerations including skills, relevant experience, and WHS considerations. To be clear, the proponent is under no obligation to employ Aboriginal people registered for consultation.

Further, receipt of this information does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties. Consultation with Aboriginal stakeholders must be in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* which can be found on the Office of Environment and Heritage (OEH) public website by accessing the following link:

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>

If you wish to discuss any of the above matters further please contact Felicity Barry, Archaeologist, on (02) 9995 6914.

Yours sincerely,

S. Harrison 20/05/15

Susan Harrison
Senior Team Leader Planning
Greater Sydney Region
Regional Operations

LIST OF ABORIGINAL STAKEHOLDERS FOR THE LIVERPOOL LGA HELD BY OEH FOR THE PURPOSES OF THE ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

These lists are provided to proponents in accordance with section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the "Consultation Requirements") which commenced on 12 April 2010.

The consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement however, this is separate from consultation. The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities for Aboriginal people.

A copy of the Consultation Requirements can be found on the OEH website at:
<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>.

Under the Consultation Requirements, a proponent is required to provide Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places as relevant to the proposed project area, with an opportunity to be involved in consultation. Section 3.3.1 of the Consultation Requirements states that Aboriginal people who can provide this information are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project.

The Consultation Requirements also state that:

Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
- *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
- *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Please note: the placement of an organisation's name on any OEH Aboriginal stakeholder list for the Consultation Requirements does not override a proponent's requirement to also advertise in the local newspaper and to seek from other sources the names of any other Aboriginal people who may hold cultural knowledge as required under clause 80C of the National Parks and Wildlife Regulation 2009.

#	Organisation	Contact Name	Phone Number	Contact Address
1	Gandangara Local Aboriginal Land Council		(02) 96025280	PO Box 1038 Liverpool NSW 2170
2	Darug Custodian Aboriginal Corporation	Leeanne Watson	02 4577 5181 / 0415 770 163	PO Box 81, Windsor NSW 2756
3	Darug Tribal Aboriginal Corporation		02 9622 4081	PO Box 441, Blacktown NSW 2148
4	Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	02 9410 3665 or 0422 865 831	90 Hermitage Rd, Kurrajong Hills NSW 2758
5	Darug Land Observations	Gordon Workman	0415 663 763/ fax 02 9831 8868	PO Box 571, Plumpton, NSW 2761
6	Des Dyer		0408 360 814	18a Perigee Close, Doonside 2767
7	Cubbitch Barta	Glenda Chalker	0427 218 425	55 Nightingale Rd, Pheasants Nest NSW 2574
8		Rebecca Chalker	Not Provided	99 Menangle street, Picton 2571
9		Phil Kahn	0434 545 982	78 Forbes Street, Emu Plains, NSW 2750
10	Wurrumay Consultancy	Kerrie Slater	0423 935 556	89 Pyramid street, Emu Plains NSW
11	Warragil Cultural Services	Aaron Slater	0481 280 067	22 Tiffany Close, Rooty Hill NSW
12	Tocomwall	Scott Franks	0404 171 544	PO Box 76, Caringbah NSW 1495
13	Gunyuu	Darlene Hoskins-McKenzie	0413078011	dghoskinsmckenzie@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
14	Walbunja	Hika Tekowhai	0402 730 612	Walbunja@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River

15	Badu		Karia Lea Bond	0476381207	11 Jeffery Place, Moruya, NSW 2537 *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
16	Goobah Developments		Basil Smith	0405 995 725	66 Grantham Road, Batehaven NSW, 2536 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
17	Wullung		Lee-Roy James Boota	0403703942	54 Blackwood Street, Gerrigong, NSW, 2534 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
18	Yerramurra		Nicholas Wade Glover	0401753202	1 Waratah Avenue, Albion Park Rail, NSW, 2547 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
19	Nundagurri		Aaron Broad	0402526888	6a Isabella Place Kiama, NSW 2533*This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
20	Bilinga		Christopher Payne	Not provided	bilingachts@gmail.com *This

					group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
21	Munyangunga		Peter Foster	Not provided	munyangachts@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
22	Wingikara		David Bell	Not provided	wingikarachts@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
23	Murrumbul		Levi McKenzie-Kirkbright	Not provided	murrumbul@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
24	Jerringong		Joanne Anne Stewart	0422800184	jerringong@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
25	Pemulwuy CHTS		Pemulwuy Johnson	0425 066 100	pemulwuyd@gmail.com 14 Top Place, Mt Annan *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury
					River to the snowy River



OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

11-13 Mansfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
P. 02 9562 6327 F. 02 9562 6350

Tamika Goward
Mary Dallas Consulting Archaeologists
PO BOX A281
ARNCLIFFE NSW 2205

13 May 2015

Dear Tamika

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 12 May 2015 regarding Aboriginal Stakeholders within the area of Prestons NSW.

I have searched the Register of Aboriginal Owners and the project area described *does not appear* to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983 (NSW)*.

I suggest that you contact the Gandangara Local Aboriginal Land Council. They will be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Sally Porter
Administration Officer
Office of the Registrar, *Aboriginal Land Rights Act (1983)*

15 May 2015 ref: OE&H : 15-5-2015/2

Mary Dallas Consulting
PO BOX A281
Arncliffe NSW 2205

Dear Sir or Madam

Aboriginal Cultural Heritage Assessment

Aboriginal Archaeological investigations at Prestons.

I refer to your letter of 12 May 2015 regarding the above matter.

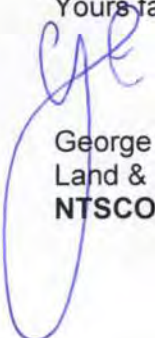
We acknowledge that section 4.1.2 of the Office of Environment & Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* require you to contact us in order to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places.

However, we advise that NTSCORP's privacy guidelines restrict us from providing proponents with contact details of traditional owners who may have such an interest or hold such knowledge.

Please be advised that, in response to your notification, we will forward your correspondence to any individuals, groups and organisations whom NTSCORP is aware assert traditional interests within or hold cultural knowledge about the relevant area. Recipients of our correspondence will be invited to register their interest in the project directly with you by the 27 May 2015.

Please be aware that NTSCORP cannot make a guarantee or undertaking that the recipients of our correspondence represent the entirety of traditional owners for the relevant area.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "G. Tonna", is written over the typed name and title.

George Tonna
Land & Notifications Officer
NTSCORP Limited



National
Native Title
Tribunal

18 May 2015

Tamika Goward
Archaeologist
Mary Dallas Consulting Archaeologist
PO Box A281
Arncliffe NSW 2205

Sydney Office, Operations East

Level 16
Law Courts Building
Queens Square
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2001
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 0649/15MO

Dear Ms Goward

Native Title Search Results for Liverpool Local Government Area

Thank you for your search request received on 11 May 2015 in relation to the above area.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	Nil.
Register of Native Title Claims	Nil.
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

At the time this search was carried out, there were **no relevant entries** in the above databases.

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

Tribunal accepts no liability for reliance placed on enclosed information

Shared country, shared future.

Freecall 1800 640 501
www.nntt.gov.au



The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact me on the numbers listed below.

Yours sincerely

Melissa O'Malley | RECEPTIONIST/CLIENT SERVICES OFFICER

National Native Title Tribunal | Sydney Office

Level 16, Federal Law Courts Building, Queens Square, Sydney, New South Wales 2000

Telephone (02) 9227 4000 | Facsimile (02) 9227 4030 | Email melissa.o'malley@nntt.gov.au

Freecall 1800 640 501 | www.nntt.gov.au

Shared country, shared future.

Date: 28 May 2015

Tamika Goward
Mary Dallas Consulting
PO BOX A281
ARNCLIFFE NSW 2205

Dear Ms Goward

Re: Notification of Aboriginal people in relation to archaeological investigations at Lots 20,33,34,35 & 43 DP2359 on Yarrunga Street Prestons

I write in response to your letter dated 12 May 2015 informing us of the forthcoming environmental assessment and request for names of Aboriginal people, who may hold cultural knowledge relevant to determining the significance of Aboriginal objects, places, and cultural values relevant to the project area.

Accordingly, please find below a list of individuals and organisations that may be able to assist with this project.

Organisation / Group	Postal Address	Email Address	Contact
Gandangara Local Aboriginal Land Council	PO Box 1038 Liverpool NSW 2170	reception@sasl.org.au	Reception Ph: 9602 5280
Tharawal Local Aboriginal Land Council	PO Box 168 Picton NSW 2571	reception@tharawal.com.au	Reception Ph: 4681 0059
Deerubbin Local Aboriginal Land Council	PO Box 40, Penrith BC NSW 2751	staff@deerubbin.org.au	Reception Ph: 02 4724 5600
Liverpool City Council's Aboriginal Consultative Committee	Locked Bag 7064 Liverpool NSW 2170	n.burrows@liverpool.nsw.gov.au	Call Centre Ph: 1300 36 2170

Should you require any further information on this matter, please do not hesitate to contact Norma Burrows, Community Development Worker (ATSI) on 9821 7758.

Yours sincerely


Kiersten Fishburn
Director Community & Culture



Tamika Goward <tamika.goward@gmail.com>

NOTIFICATION OF ABORIGINAL PEOPLE

Margaret Bottrell <margaret.bottrell@lts.nsw.gov.au>

Tue, May 19, 2015 at 8:52 AM

To: Tamika Goward <tamika@mdca.com.au>

Hi Tamika,

Under the act that we work, I am not allowed to pass on the information that you requested in your letter dated 12 May 2015 Re: NOTIFICATION OF ABORIGINAL PEOPLE IN RELATION TO ABORIGINAL ARCHAEOLOGICAL INVESTIGATIONS AT LOTS 20, 33, 34, 35 & 43 DP 2359 ON YARRUNGA STREET, PRESTONS NSW

The Greater Sydney Local Land Services (former Catchment Management Authority) has no interest in this project, and will pass your letters on to the members of our Advisory Committee for their information. If they comment on this, it is an individual person and not a representative of the Greater Sydney Local Land Services.

Regards

--

Margaret Bottrell Senior Strategic Land Services Officer
(Aboriginal Communities)

Greater Sydney Local Land Services

NSW Government Office Block Level 4, 2-6 Station Street Penrith

PO Box 4515 Penrith Westfields NSW 2750

T: 02 4725 3049 **F:** 02 4725 3088

E: margaret.bottrell@lts.nsw.gov.au

W: <http://www.lts.nsw.gov.au>

This message is intended for the addressee named and may contain confidential information. If you are not the intended recipient, please delete it and notify the sender. Views expressed in this message are those of the individual sender, and are not necessarily the views of their organisation.

Admin

From: Ronald Stewart <walgaluchts@gmail.com>
Sent: Sunday, 31 May 2015 11:40 PM
To: admin@mdca.com.au

Walgalu is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

--

Regards
Ronald Stewart
Chairperson
Walgalu
Murrin Stakeholder

Admin

From: Violet Carriage <tharawalchts@gmail.com>
Sent: Sunday, 31 May 2015 11:40 PM
To: admin@mdca.com.au

Tharawal is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

--

Regards
Violet Carriage
Chairperson
Tharawal
Murrin Stakeholder

Admin

From: Newton Bond <ngarigochts@gmail.com>
Sent: Thursday, 28 May 2015 9:58 PM
To: admin@mdca.com.au

Ngarigo is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

--

Regards
Newton Bond
Cultural Heritage Officer
Ngarigo
Murrin Stakeholder

Admin

From: Lenard Nye <elouerachts@gmail.com>
Sent: Thursday, 4 June 2015 2:23 AM
To: admin@mdca.com.au
Subject: Registration of Interest

Elouera is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

--

Regards
Lenard Nye
Chairperson
Elouera
Murrin Stakeholder

Admin

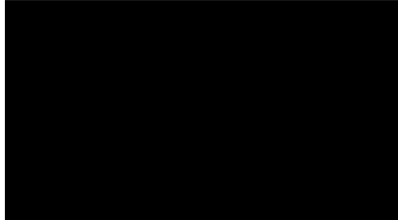
From: Andrew Bond <dharugchts@gmail.com>
Sent: Sunday, 31 May 2015 11:41 PM
To: admin@mdca.com.au

Dharug is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

--

Regards
Andrew Bond
Chairperson
Dharug
Murrin Stakeholder

27 May 2015



**RE: NOTIFICATION OF ABORIGINAL PEOPLE IN RELATION TO ABORIGINAL
ARCHAEOLOGICAL INVESTIGATIONS AT LOTS 20, 33, 34, 35 & 43 DP2359 ON YARRUNGA
STREET, PRESTONS NSW**

Proponent: Logos Development Management Pty Ltd [Suite 2, Level 12, 167 Macquarie Street Sydney NSW 2000]

Logos Development Management Pty Ltd is proposing to undertake Aboriginal archaeological investigations within Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW. These investigations will be undertaken under the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. The proponent has engaged MDCA [Mary Dallas Consulting Archaeologists] to coordinate Aboriginal community consultation as required by National Parks and Wildlife Regulation 2009 (Clause 80C).

Accordingly we have received your details from the Office of Environment & Heritage as someone who may potentially hold cultural knowledge relevant to determining the significance of Aboriginal objects at this location. If this is the case, you are invited to register your interest in the current project to ensure that you are consulted in accordance with the above Regulation. If required, this consultation may also assist the proponent in preparing an Aboriginal Heritage Impact Permit application under s90 of the National Parks & Wildlife Act 1974, and the Office of Environment & Heritage in determining the application.

Please note that details of Registered Aboriginal Parties will be forwarded to The Office of Environment & Heritage and the Gandangara Local Aboriginal Land Council as required under the above Regulation. If you do not wish this to occur, please notify us along with your registration of interest

IF YOU WISH TO BE REGISTERED as a Registered Aboriginal Party, please notify MDCA in writing by **Thursday June 11, 2015** at one of the following addresses:

POST**FAX****EMAIL**

c/- PO Box A281

(02) 8520 2006

admin@mdca.com.au

Arncliffe NSW 2205



Please ensure that you provide us with current postal addresses and contact names. Any enquiries should be directed to Paul Irish on 0418 450 490 or our office on 02 4465 2546.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tamika Goward'.

Tamika Goward

Mary Dallas Consulting Archaeologists

Admin

From: Nicolas Wade Glover <yerramurra@gmail.com>
Sent: Wednesday, 27 May 2015 11:31 PM
To: admin@mdca.com.au

Yerramurra is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

Regards
Nicholas Glover
Chairperson
Yerramurra

Admin

From: David Bell <wingikarachts@gmail.com>
Sent: Wednesday, 27 May 2015 3:32 PM
To: Admin
Subject: Re: Aboriginal Archaeological Investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW

Good afternoon Tamika,

Thank you kindly for this information. Please register Wingikara's interest in this project.

Could you also please note that Wingikara would like for its personal information to be released to OEH or any relevant Local Aboriginal Land Council.

Wingikara looks forward to working with you in the near future.

Kind regards
David Bell

On Wed, May 27, 2015 at 11:50 AM, Admin <admin@mdca.com.au> wrote:

Dear Mr Bell,

The attached letter is a notification in relation to proposed Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW. If you wish to be registered as a Registered Aboriginal Party, please contact MDCA in writing by 11th June 2015.

Regards,

Tamika Goward

Tamika Goward BA(Hons)

Archaeologist

Mary Dallas Consulting Archaeologists

PO Box A281

Arncliffe NSW 2205

T: + [61 2 4465 2546](tel:61244652546)

F: + [61 2 8520 2006](tel:61285202006)

M: 0488 999 452

E: tamika@mdca.com.au

W: www.mdca.com.au

Admin

From: William Bond <wandandianchts@gmail.com>
Sent: Wednesday, 27 May 2015 11:32 PM
To: admin@mdca.com.au

Wandandian is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

Regards
William Bond
Chairperson
Wandandian

Admin

From: hika te-kowhai <walbunja@gmail.com>
Sent: Wednesday, 27 May 2015 11:31 PM
To: admin@mdca.com.au

Walbunja is formally registering an interest in the Aboriginal archaeological investigations at Lots 20, 33, 34, 35 and 43 in DP2359 at Yarrunga Street, Prestons NSW, as a registered Aboriginal Stakeholder for consultation requirements for proponents.

Regards
Hika TeKowhai
Senior Technical Services Officer
Walbunja