

**ABORIGINAL & HISTORICAL
ARCHAEOLOGICAL IMPACT ASSESSMENT
EASTLAKES SHOPPING CENTRE, EASTLAKES
NSW
FOR
CROWN PROSHA JOINT VENTURE**



Eastlakes Shopping Centre, Evans Avenue

**Final Report
April 2012**

AHMS

ARCHAEOLOGICAL & HERITAGE MANAGEMENT SOLUTIONS

SYDNEY
349 Annandale St,
Annandale, NSW 2038
P: (02) 9555 4000
F: (02) 9555 7005

MELBOURNE
2/35 Hope St,
Brunswick, VIC 3056
P: (03) 9388 0622

PERTH
13/336 Churchill Ave
Subiaco, WA 6008
P: (08) 6262 2025

W: www.ahms.com.au

E: info@ahms.com.au

ABN: 45 088 058 388

ACN: 088 058 388

EXECUTIVE SUMMARY

Background

1. In February 2012, Archaeological and Heritage Management Solutions Pty Ltd (AHMS) was commissioned by Crown Prosha Joint Venture (CPJV) to undertake an Aboriginal and historical archaeological impact assessment of the proposed redevelopment of the Eastlakes Shopping Centre, Eastlakes NSW ('the subject site');
2. CPJV proposes to redevelop the site and is seeking Project Approval for the proposed development under Part 3A of the *Environmental Planning and Assessment Act, 1979* (Major Project Number: MP 09_0146).
3. The heritage assessment will be part of the Environmental Assessment (EA) for the proposed redevelopment of the subject site.
4. Specifically, the heritage assessment was undertaken in response to the draft Director General's Requirements (DGR) 14 (dating to the 4 April) which stated that '*the EA shall provide an Archaeological Assessment of Aboriginal and non-Indigenous archaeological resources, including an assessment of the significance and potential impact on the archaeological resources*'.
5. The final DGRs issued 5 April 2012, added that the archaeological assessment should be undertaken in accordance with the '*DECCW guidance for Aboriginal Cultural Heritage Assessment and Community Consultation*'. The heritage assessment generally follows the DECCW '*Draft Guidelines For Aboriginal Cultural Heritage Impact Assessment and Community Consultation*' (Department of Environment and Conservation, now Department of Environment, Climate Change and Water (DECCW) July 2005).
6. Informal Aboriginal community consultation was undertaken with the La Perouse Local Aboriginal Land Council as part of the archaeological assessment.
7. A site inspection was undertaken of the subject site with a representative of the La Perouse Local Aboriginal Land Council, however no physical inspection of the site's under-lying archaeological/soil deposits was undertaken due to access constraints (existing building and tarmac car park).

Findings - Non-Indigenous (Historical) Archaeology

8. The assessment indicates that it is unlikely that any substantial features or significant deposits associated with the historical use of the subject site remains as archaeological relics on the subject site.

9. No further action is required in relation to potential historical archaeological remains on the subject site prior to commencement of development; however,
10. Should any potential archaeological features deposits or other artefacts be exposed during the development work then an archaeologist should be notified and advice sought regarding the nature and significance of the find.

Findings - Aboriginal Archaeology

11. It is unlikely that Aboriginal objects and/or sites survive at the subject site due to historical land uses at the site; however,
12. As the soil profile beneath the subject site is not fully known, there is the potential for older (Pleistocene period, c.50,000 to 10,000 years ago) soil profiles to survive intact. These deposits occur at depth and have the potential to contain Aboriginal sites and/or objects.
13. Should Pleistocene period Aboriginal archaeological sites and/or object, exist at the subject site, they would be considered to have high scientific and cultural significance.
14. The proposed development may impact Aboriginal sites and/or objects should intact soil profiles exist at the subject site.

It is recommended, subject to Project Approval under Part 3A, that:

15. An archaeologist should be engaged to prepare briefing documents and a monitoring plan that would apply to the excavation of the subject site during development works. The plan should specify when and how monitoring should occur and in what locations at the subject site.
16. The briefing document should identify, explain and illustrate the likely nature of the potential archaeological resource of the subject site. The briefing document should be distributed to work crews and project managers prior to ground disturbance and explained by an archaeologist at toolbox meetings.
17. Should any Aboriginal objects and/or sites be uncovered during the development works work should cease and the archaeologist should assess nature and significance of the find.
18. Aboriginal community consultation, salvage and/or collection of artefacts may be required should any Aboriginal archaeological sites and/or object be identified during development works. Consideration of timeframes and costs should be considered by the Proponent during the approval process.

CONTENTS

1. Introduction	5
1.1 Background	5
1.2 The Study Area	6
1.3 The Proposal	8
1.4 Aims and Objectives	9
1.5 Limitations	10
1.6 Authorship	10
1.7 Acknowledgements	10
2. Historical Archaeological Impact Assessment	11
2.1 Statutory Considerations and Heritage Listings	11
2.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	11
2.1.2 Environmental Planning and Assessment Act 1979 (NSW)	11
2.1.3 Heritage Act 1977 (NSW)	12
2.1.4 Non-Statutory Listings	13
2.2 History	14
2.3 Site Development and Potential Archaeological Resources	33
2.4 Historical Impact Assessment	35
3. Aboriginal Archaeological Impact Assessment	36
3.1 Statutory Considerations	36
3.1.1 Commonwealth Statutory Considerations	36
3.1.2 Environmental Planning and Assessment Act 1979 (NSW)	36
3.1.3 National Parks & Wildlife Act 1974 (NSW)	37
3.2 Aboriginal Community Consultation	38
3.3 Landscape Context	38
3.3.1 Background	38
3.3.2 Geology Soils	38
3.3.3 Vegetation	41
3.3.4 Watercourses	42
3.3.5 Historical Land Use and Disturbance	42
3.4 Regional Character	43
3.4.1 Regional Context	43
3.5 Local Context	46
3.5.1 AHIMS Search Results	49
Aboriginal Archaeological Potential	49
3.6	49
3.6.1 Aboriginal Archaeological Potential and Survival	51
3.7 Impact Assessment	52
4. Conclusions & Recommendations	53
4.1 Historical Heritage	53
4.1.1 Conclusions	53
4.1.2 Recommendations	53
4.2 Aboriginal Heritage	54

4.2.1	Conclusions.....	54
4.2.2	Recommendations.....	54
5.	References.....	56
Appendix 1	- Subject Site Plans and Survey Referred to in Report	59

1. INTRODUCTION

1.1 Background

In February 2012, Crown Prosha Joint Venture (CPJV) commissioned Archaeological and Heritage Management Solutions Pty Ltd (AHMS) to undertake an Aboriginal and historical heritage impact assessment of a proposed development at the Eastlakes Shopping Centre site, Eastlakes, NSW ('the subject site'). CPJV proposes to redevelop the subject site and is seeking Project Approval for the proposed development under Part 3A of the *Environmental Planning and Assessment Act, 1979* (Major Project Number: MP 09_0146).

An Environmental Assessment (EA) is required to support the development application for the subject site under Part 3A of the *Environmental Planning and Assessment Act 1979* and the final Director General's Requirements (DGRs) for the proposal and the EA were issued 5 April 2011. This report has been prepared in response to Draft DGR Item 14, which specifically refers to archaeology:

The EA shall provide and Archaeological Assessment of Aboriginal and non-Indigenous archaeological resources, including an assessment of the significance and potential impact on the archaeological resources.

The final DGR requirements issued 5 April 2012 added that the archaeological assessment be undertaken

...in accordance with DECCW guidance for Aboriginal Cultural Heritage Assessment and Community Consultation.

This report generally follows the DECCW '*Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*' (Department of Environment and Conservation, now Department of Environment, Climate Change and Water (DECCW) July 2005).

1.2 The Study Area

The subject site is located at Evans Avenue, Eastlakes (**Figure 1** and **Figure 2**). The subject site includes the real property descriptions Lot 3 and 5 DP 248832, Lot 41 and 42 DP 601517, and Lot 100 DP 700822. The subject site is located in the Parish of Botany, County of Cumberland and in the Botany Bay local government area.

A brief site inspection of the subject site was undertaken by Laura Matarese and Matthew Kelly (AHMS) and Shane Ingrey from La Perouse Local Aboriginal Land Council (LPLALC) on the 9 March 2012. It did not include investigation inside or under the current structures at the subject site or sub-floor areas.

The subject site is bound by Gardeners Road to the north, residential buildings to the northwest and Eastlakes Reserve to the south west, Barber Avenue to the south and south east and residential buildings to the north east.

The northern part of the subject site is currently occupied by a one storey brick grocery shop bound by Gardeners Road with a car parking area accessible from Evans Avenue. The southern part of the subject site is occupied by the Eastlakes shopping centre with a one level basement car park. A former McDonald's restaurant (single storey brick building) is located to the north west of the Eastlakes shopping centre bound by Evans Avenue to the north and the Eastlakes Reserve to the west.

The subject site slopes downward from Gardeners Road to Barber Avenue. The Eastlakes shopping centre is at ground level fronting Evans Avenue and is supported by visible concrete piers at the rear of the building bound by Barber Avenue. The car park is accessible from Barber Avenue and by a ramp adjacent to the western side of the shopping centre building from Evans Avenue.

During the site inspection the topography surrounding the subject site was noted. Evans Avenue appears to slope slightly from east to west. The Eastlakes Reserve, visible from the south western part of the basement level car park, was noted as being lower than the floor of the basement level. A vehicular inspection indicated there is a rise from the southern boundary of the subject site to Universal Street.



Figure 1. Plan of the general location of the study area, circled (source: JBA Urban Planning 17 July 2009)



Figure 2. A recent aerial photograph with the study area outlined in red (source: JBA Urban Planning 17 July 2009).

1.3 The Proposal

The current proposal for the subject site includes:

- the redevelopment of the existing shopping centre as a mixed use residential and retail building including two basement levels (one basement level currently exists at the site);
- the construction of residential apartments and retail facilities fronting Gardeners Road with two basement levels (no basement levels currently exist at this part of the site);
- new access ways; and

- new services.

The plans referred to in the preparation of this assessment are listed below. These plans were prepared by Rice Daubney Architects (no date), except where stated otherwise.

- Preliminary Plan: Site Plan (Project No. 11001, Drawing No. DA 02, Issue A);
- Preliminary Plan – Ground Floor Retail Level (Project No. 11001, Drawing No. DA 03, Issue A);
- Preliminary Plan – Typical Basement Level 1 (Project No. 11001, Drawing No. DA 04 Issue A);
- Preliminary Plan – Typical Basement Level 2 (Project No. 11001, Drawing No. DA 05 Issue A); and
- Existing Site Survey (Project No. 11001, Drawing Number DA 00, Issue A)

1.4 Aims and Objectives

The purpose of the assessment was to identify whether any historical or Aboriginal archaeological resources (deposits and associated objects) may survive at the site, to indicate their likely heritage significance, to assess whether any archaeological resources would be impacted by the proposed development and recommend further archaeological assessment, investigation and/or management if warranted. Specifically, the aims of the impact assessment were to:

- Outline the statutory requirements relevant to the subject site with regard to Aboriginal and historical archaeology;
- Carry out background research to identify known items and places of Aboriginal archaeological and historical heritage significance at the site, and to identify the potential for any unknown archaeological resources and places of significance at the subject site;
- Carry out a brief site inspection of the subject site;
- Identify the known and potential Aboriginal and historical resources of the site and indicate their likely heritage significance;
- Assess the potential for the proposed development to directly and indirectly impact the Aboriginal and historical archaeological resources of the site; and
- Identify and recommend further assessment if warranted and if appropriate, identify measures to mitigate any potential adverse heritage impacts, including any requirements to undertake more focussed and detailed archaeological assessments to further inform the development, inform the assessment of the Project Application and/or inform design detail.

The assessment is presented in three Sections. **Section 1** (this part) introduces the location of the subject site and provides a description of the proposal. **Section 2** discusses the historical archaeological potential of the subject site and **Section 3** discusses the Aboriginal archaeological potential of the subject site.

1.5 Limitations

As the subject site is largely covered boundary to boundary by an existing multi level commercial building, a hard-stand car park, a residential building and access ways, the assessment has relied on existing landform and historical information to identify the potential Aboriginal and historical archaeological resources at the subject site;

- The assessment was undertaken using available information regarding likely sub-surface soil profiles and likely levels of disturbance. Sub-surface investigations of the subject site would assist in more accurately identifying the level disturbance and the likelihood for Aboriginal archaeological resources to survive;
- Preliminary Aboriginal community consultation has been undertaken with the Local Aboriginal Land Council for this assessment; and
- The historical archaeological assessment generally follows initial steps in NSW Heritage Council (2009) *Assessing Significance for Historical archaeological Sites and 'Relics'*.
- The Aboriginal archaeological assessment generally follows the DECCW (July 2005) *'Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation'*.

1.6 Authorship

This report was written by Laura Matarese (Consultant AHMS) with a history section authored by Matthew Kelly (Senior Consultant AHMS). Lisa Newell (Associate Director, AHMS) reviewed and provided quality assurance of the report.

1.7 Acknowledgements

We gratefully acknowledge the assistance of Rod Pascoe, Matthew Crews and Marcus Hinzack (CPJV), Shane Ingreay and Christy Ryan (La Perouse Local Aboriginal Land Council), Eastlakes Public Library, Randwick Public Library and Office of Environment and Heritage (OEH) Hurstville in the preparation of this report.

2. HISTORICAL ARCHAEOLOGICAL IMPACT ASSESSMENT

2.1 Statutory Considerations and Heritage Listings

Historical heritage and archaeology in New South Wales can be protected by a number of pieces of legislation; Commonwealth, State and local. Those of relevance are summarised below, along with a summary of how they may apply, or not apply to Part 3A 'Concept Plan Approval' and/or 'Project Approval' proposals.

2.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a statutory framework for protecting and managing significant environmental and cultural heritage places, flora, fauna and environmental communities. The Act establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL) and provides protection for places included in the two lists. The Act also provides protection for those Australian places on the World Heritage List (WHL).

The study area does not include any places of historical heritage value that are listed on the WHL, CHL or the NHL.

2.1.2 Environmental Planning and Assessment Act 1979 (NSW)

The *Environmental Planning and Assessment Act 1979* (EP&A Act), together with the *Heritage Act 1977* and the *National Parks and Wildlife Act 1974*, form an integrated system for managing environmental heritage in NSW.

Part 3A

The Proposal is a Project Application submitted under Part 3A of the *Environmental Planning and Assessment Act 1979*.

Under Section 75U 1 (c-d) of the *EP& A Act*, Part 3A Project Approvals do not require approvals, permits and/ or consents of the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977* in relation to Aboriginal or historical heritage, respectively.

Should the Project Approval be subject to a local approval, integrated approvals, permits and/ or consents under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977* in relation to Aboriginal or historical heritage, respectively would apply.

Local Environmental Plans

The study area falls within the Botany Bay Local Government Area (LGA). Gardeners Road, the northern most boundary of the subject site, is a boundary of the LGA. The adjacent LGA is the City of Sydney (formerly part of the South Sydney Council area).

The relevant environmental planning instruments for the subject site are the *Botany Local Environmental Plan (BLEP) 1995*. A *Draft Botany Bay Local Environmental Plan (BBLEP) 2011* is currently being prepared by Council.

The subject site is not listed as a heritage item, or within the vicinity of a heritage item listed on the Draft BBLEP 2011 or the BLEP 1995.

In addition, the heritage schedule of the South Sydney LEP 2008 was also examined. No heritage items are located in the vicinity of the subject site within the adjacent LGA.

2.1.3 Heritage Act 1977 (NSW)

The NSW *Heritage Act 1977* is designed to conserve the environmental heritage of New South Wales and regulate development impacts on the state's heritage assets. Significant historical archaeological features are afforded automatic statutory protection by the relics provisions of the Act. A 'relic' is defined as:

any deposit, artefact, object or material evidence that:

- a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- b) is of State or local heritage significance.*

It is an offence to disturb or excavate land, where this may affect a relic, without the approval of the Heritage Council of NSW, or an endorsed 'Exemption' or 'Exception' applies.

The *Heritage Act 1977* establishes the State Heritage Register (SHR), a list of places and items of State heritage significance. The Act provides statutory protection for items included on the SHR. Approval from the Heritage Council of NSW is required prior to undertaking work that results in the alteration or modification of a SHR-listed item.

In addition to the SHR, the *Heritage Act 1977* requires that State government agencies maintain registers of heritage assets within land that they own and/or manage. These listings are reproduced on a Section 170 Heritage Conservation Register.

The subject site is not listed on the SHR or Section 170 Conservation Registers.

One heritage item listed on the SHR is near the subject site (approximately 500 m to the east):

- The Botany Waters Reserve (Database # 5051418, File # 10/141814, H06/00076).

2.1.4 Non-Statutory Listings

There are a number of non-statutory and information only heritage lists which are relevant to the study area. Some include places and items that are otherwise also included in statutory registers.

The non-statutory heritage lists that have been searched are the Register of the National Estate (RNE), State Heritage Inventory (SHI) (which lists places and items in State and local heritage schedules) and the Register of the National Trust of Australia (NSW).

The subject site is not listed on the RNE, SHI or National Trust Register.

2.2 History

The following historical outline of the development of the subject site has been developed from readily available historical sources.

- The area of early Sydney which encompassed the subject site was a sandy and partly swampy area south of the early township of Sydney and north of Botany Bay. It formed the southern reaches of the Botany Sand Dune complex consisting of Quaternary wind-blown sand (see **Figures 5-6**). Sclerophyllous heath, scrub and low forest covered the sand dunes.¹ The area is traversed by three principal water courses; Shea's Creek (now the Alexandra Canal), Lachlan Swamps Creek draining from Centennial Park ponds and the Bunnerong Creek.
- The subject site was originally part of both T.M. Winder's, 1823, 417 acre grant in the Parish of Botany and unallocated land to Winder's west (see **Figures 3-4**). Winder had formerly been a merchant and sea captain. In August 1820 he, along with Samuel Terry, established the Lachlan Flour Mill. Later their partnership included Daniel Cooper and William Hutchinson and the company renamed The Lachlan and Waterloo Flour Mills.
- The unallocated land was to be eventually granted to James Holt (see **Figure 4**). Holt was a former partner of Daniel Coopers, a banker and property speculator who suffered in the 1840s depression. He was also the treasurer of the Waterloo Warehouse, the successor to The Lachlan and Waterloo Mills Co.
- By 1881 the western half of the site had been subdivided and partially developed. However the eastern side, possibly because of its proximity to the swampy area, remained undeveloped (see **Figure 7**).
- The site became the Rosebery Racecourse, a registered course in 1906. Rosebery Park racecourse had existed earlier at another site in Mascot.²
- Reportedly the grandstand erected at Rosebery was the one dismantled at the earlier Rosebery Park course that had moved to this location (see **Figure 8**).
- During WW1 the course was used by the 1st Light Horse as a recruitment, training and parade ground between August and October 1914.³
- Part of the stand for the racecourse collapsed in 1928 during a storm with hundreds thrown to the ground with only a few injuries (see **Figure 9**).

¹ Benson, D and Howell, J, 1995, *Taken For Granted*, Kangaroo Press, p.25

² Wittaker, A, *South Sydney Pictorial History*, Kingscleere, p.97, and Peake, W, 2006, *Sydney's Pony Racecourses*, Walla Walla Press, p.20.

³ SMH, 25th August and 24th Sept, 1914.

- The racecourse was remodelled and the track extended to the east in 1928-9 with the dismantled structures auctioned as recycled building materials and scrap. (see Figures 10, 13 and 15).
- In July 1940 the course was taken over by the Government for use by the military forces.⁴ The 8th Division, 2nd AIF, used the site prior to its embarkation to Malaya and eventual capture in Singapore. Subsequent use saw the erection of numerous temporary structures across the public area and the interior of the track (see Figures 16 and 19).
- After the war the racecourse was purchased by the Sydney Turf Club (STC) in 1948 and continued in use as a racecourse.⁵
- The STC sold the racecourse in 1961, but it continued to be utilised as a horse training facility until May 1962.⁶
- Of the racecourse site 56 ½ acres, including the study area, were sold to a subsidiary of Sir Paul Strasser's Parkes Development Pty Ltd for £450,000 and the remaining 6 acres to the NSW Housing Commission.⁷
- In 1964 it was announced that the NSW Housing Commission would build two nine-storey blocks of flats at the western end of the former racecourse site facing Maloney Street (not on the study area).⁸ The flats were completed by 1967.
- The Lakes Shopping Centre and surrounding housing and flats were completed over the next 5 years with the residential nature of the area firmly established by the early 1970s (see Figures 20, 21 and 22).

⁴ SMH, July 10, 1940.

⁵ SMH, Jul 1, 1948.

⁶ SMH, April 3, 1962.

⁷ Construction Review, August 1967.

⁸ SMH, Sept 14, 1964.

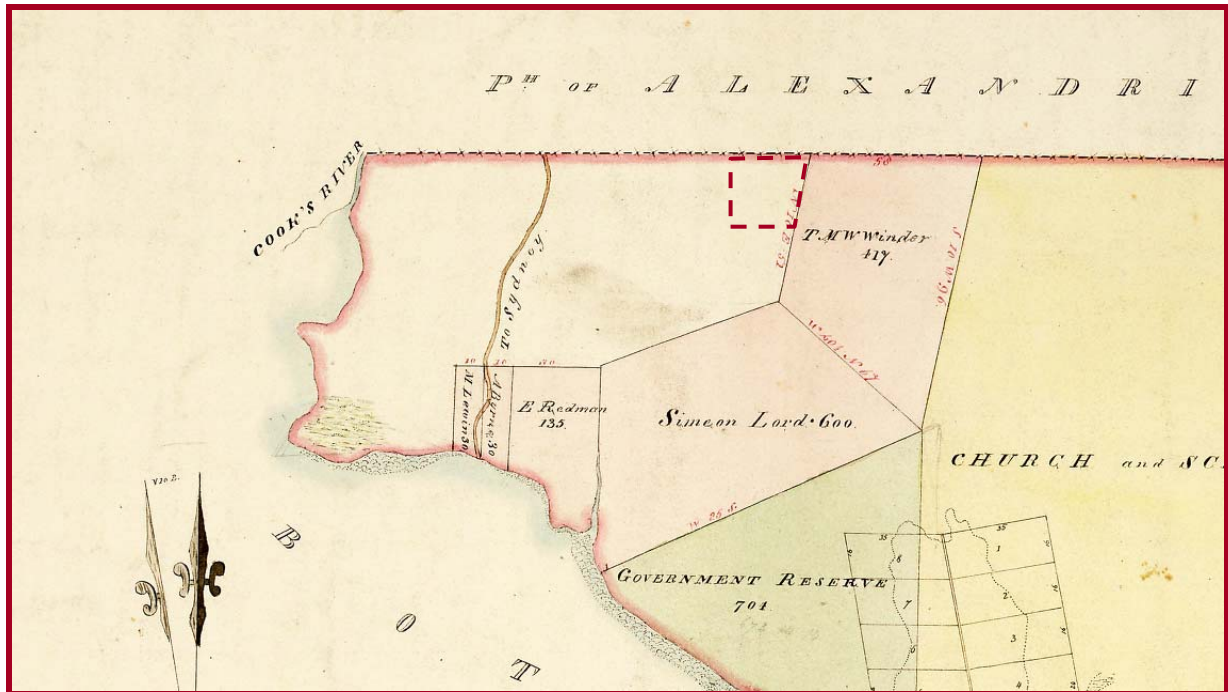


Figure 3. Details of parish map showing the boundary of James Holt's grant to the west of Winder's. Parish Map of Botany (nd), NSW Land and Property Information.

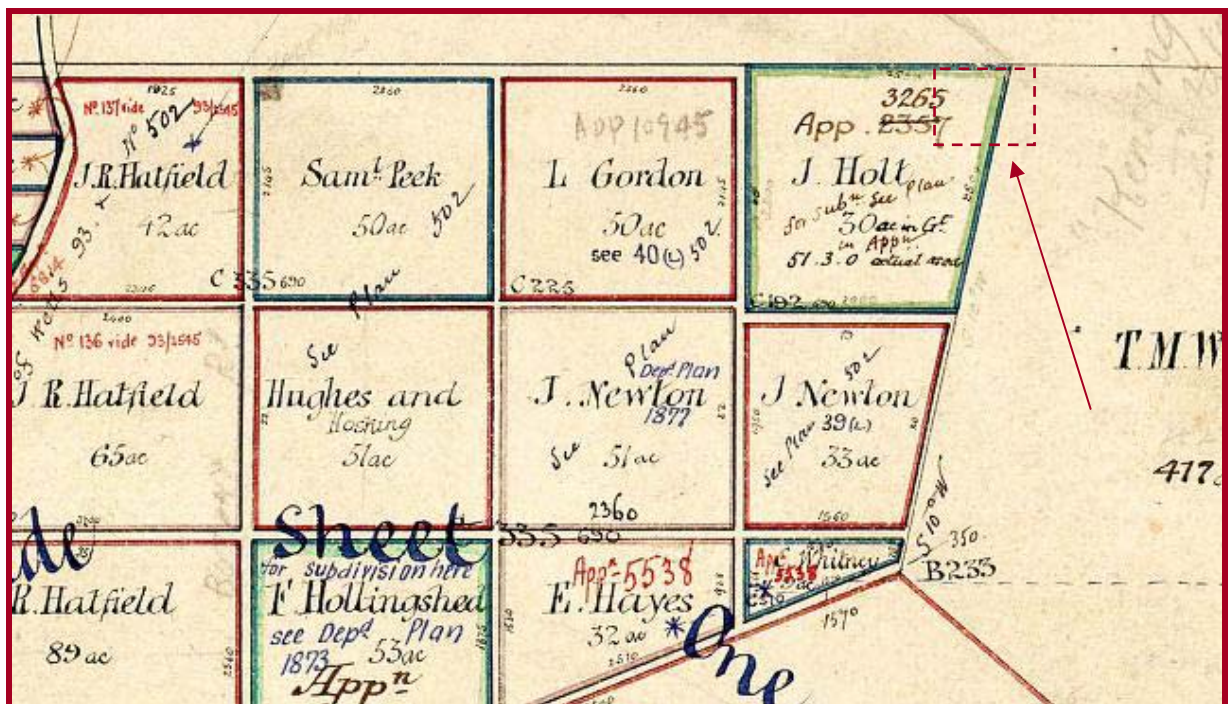


Figure 4. Details of parish map showing James Holt's grant to the west of Winder's. The subject site straddles the boundary between Holt and Winder's grants. Parish Map of Botany (nd, ?1860s?), NSW Land and Property Information



Figure 5. Plan of the Botany and Lachlan Watershed, L Blackwell, 1875 (ML Z/M3 811.18ghhd/1875/1)

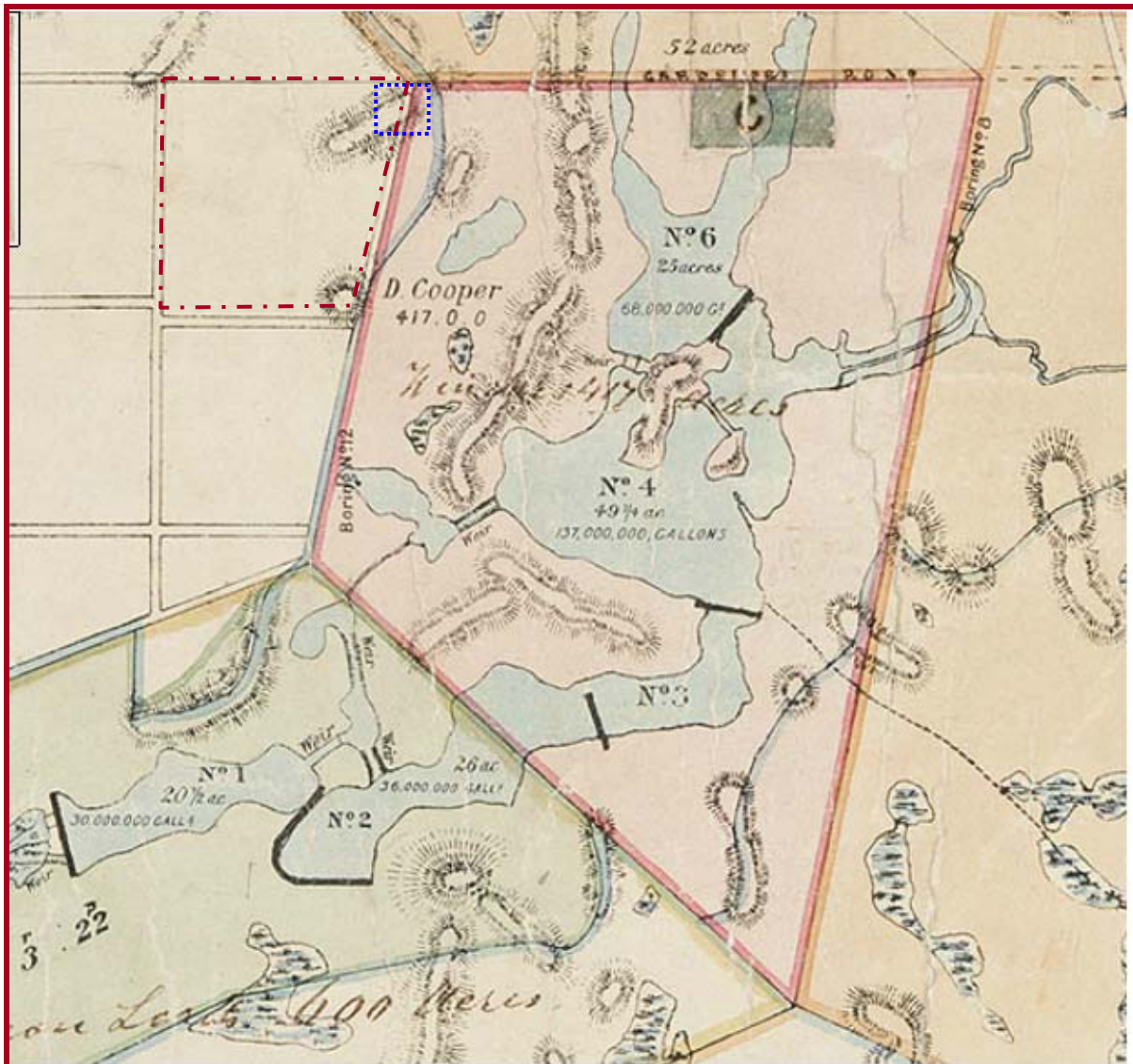


Figure 6. Detail of Plan of the Botany and Lachlan Watershed, showing Holt's grant (red) and the extensive water management system on the adjacent lakes. The approximate location of the study area is shown in blue.



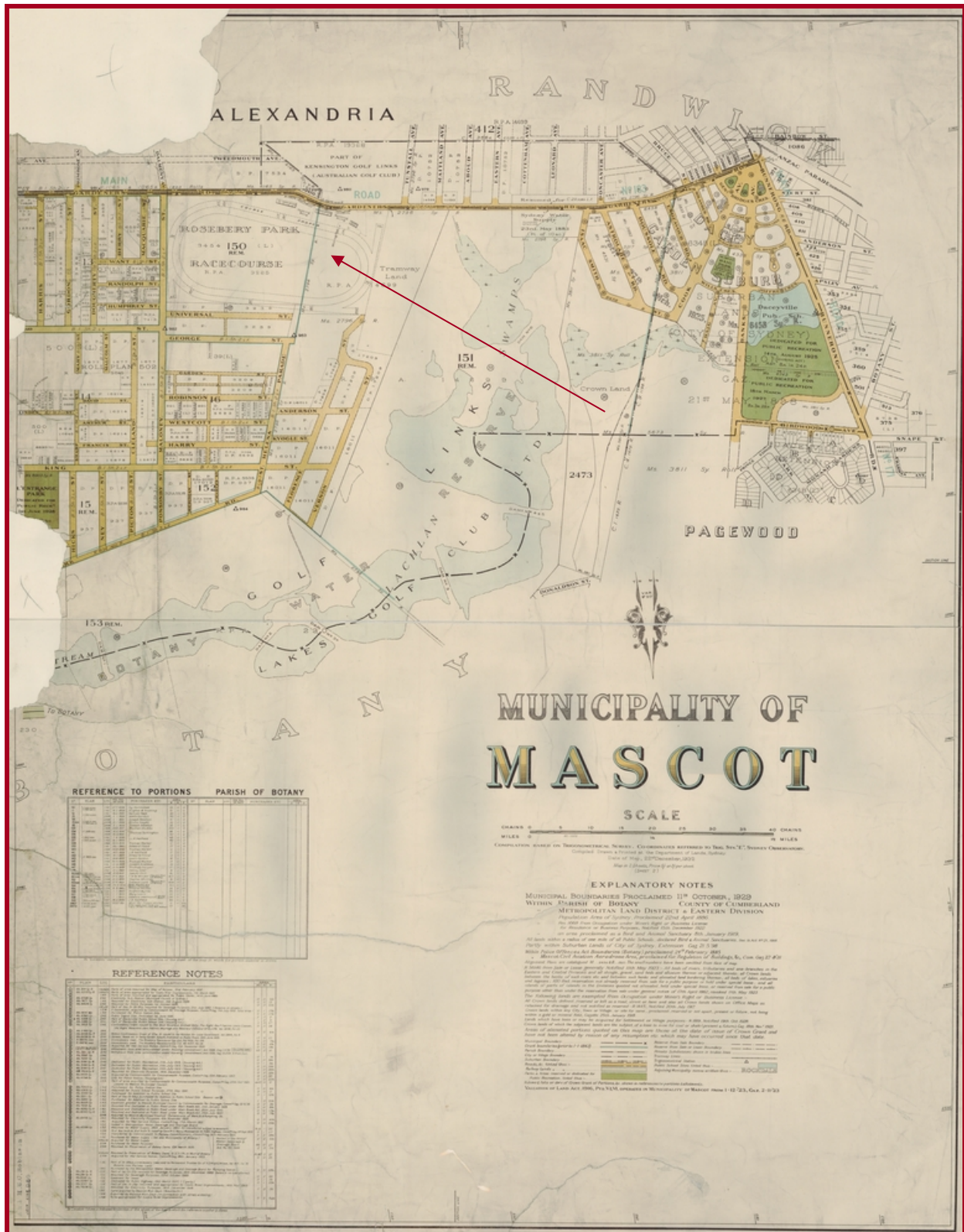
Figure 7. Detail of map of the southern part of Sydney with the approximate position of the subject site indicated with a red square. Note the block which formed Holt's grant has been developed on its western side only. "Map of the Countryside Around Sydney", Thomas Parrot, 1881 (NLA Map 903).



Figure 8. Leger grandstand, looking west, at Rosebery Racecourse, early 20th Century.



Figure 9. Photo from newspaper report on the collapsed stand. (SMH April, 1928).



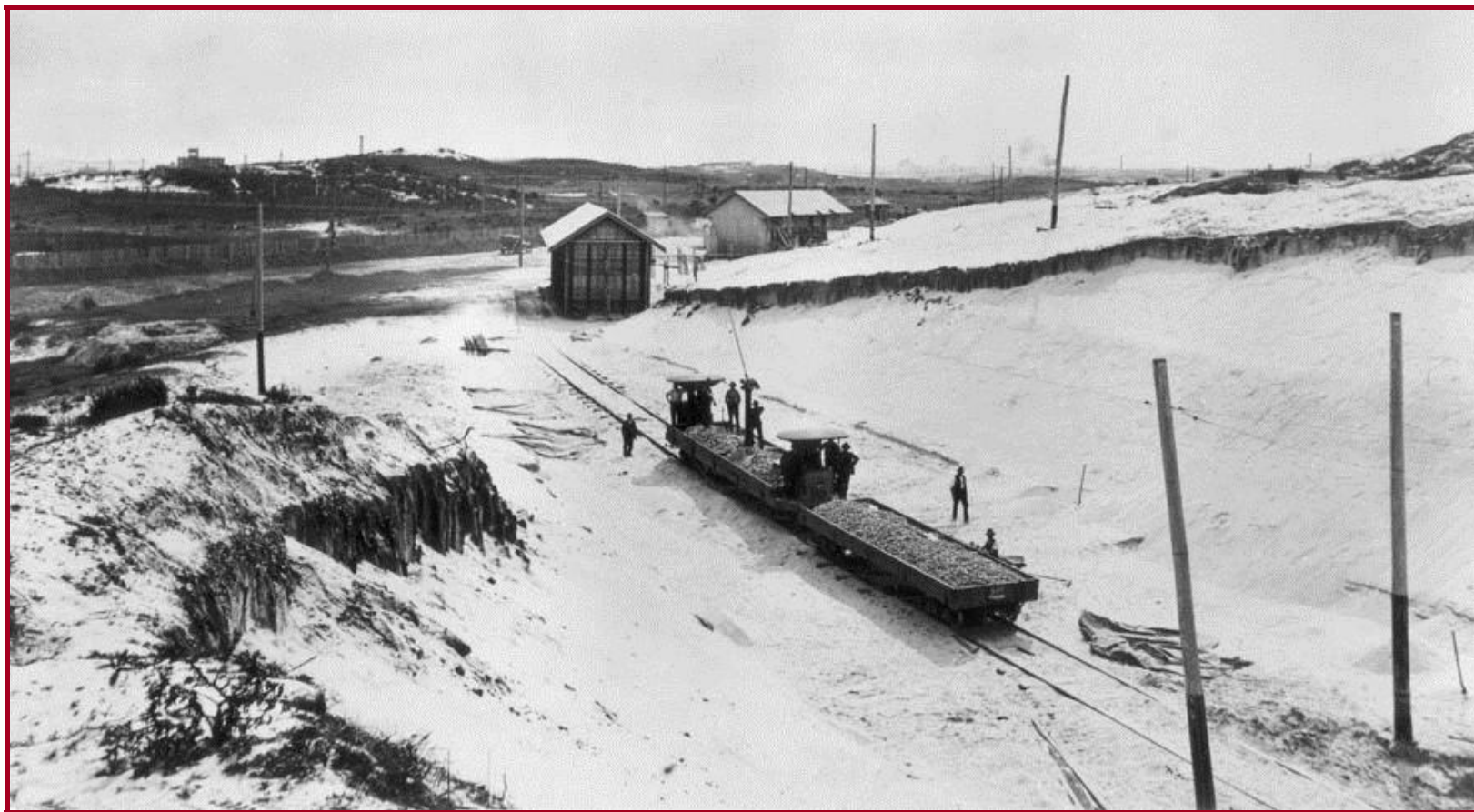


Figure 14. Rosebery sand siding with Gardener's Road and the racecourse in the background, post 1922. This area, adjacent to the racecourse, was used as a source for sandmining, with the dunes readily available sources. Note the coffee rock exposed in the section of the excavation. (<http://tdu.to/43838.msg>)



Figure 15. Detail of 1930 aerial of the racecourse. The former course of the smaller racecourse can be seen running through the centre of the later extended course. (NSW Lands Department)

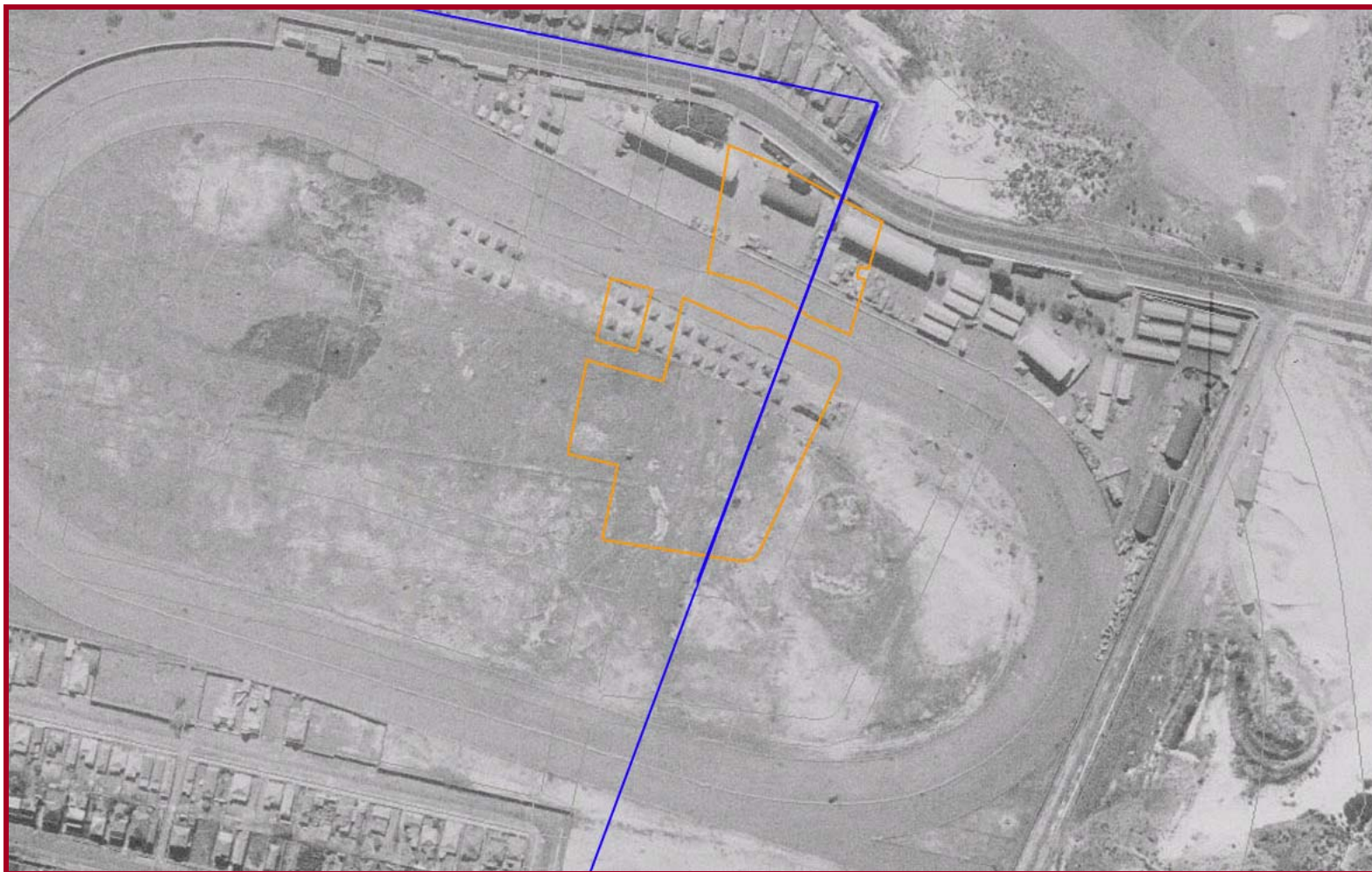


Figure 16. 1943 aerial of the subject site (outlined in orange) on the site of Rosebery Racecourse. Note the additional structures compared to figure 12, no doubt constructed by the military. The former northern and eastern boundaries of Holt's grant are shown in blue. (NSW RTA)



Figure 17. Gardener's Road looking west with Rosebery Racecourse at the left of photo. (ML GPO2)



Figure 18. Composite panorama of the racecourse after the WW2 occupation. "Panoramic View of Rosebery Racecourse, Previously 1 Australian Returned Stores Depot", (AWM, 1946, 126627-31).



Figure 19. The area of the racecourse in 1961. Note the Lakes Golf Course has been established to the north. (NSW Lands Department)



Figure 20. Detail of Charting Map showing the later 20th Century street development of the racecourse. County of Cumberland Parish of Botany (sheet 2b), 1971



Figure 21. Oblique aerial of the subject site with its boundary indicated. "Aerial photographs of the Lakes Shopping Centre and surrounding flats construction, Eastlakes, 26th June, 1965", (ML 20036)



Figure 22. Aerial Photo of the study area, 1971. (NSW Lands Department).

2.3 Site Development and Potential Archaeological Resources

The available evidence suggests that during the 19th Century, little if any activities took place on the site.

For some time, perhaps 30-40 years after European settlement, the land which was to form the western 2/3 of the Rosebery Racecourse, remained ungranted and was there is no evidence of specific development or improvement. Part of the eastern portion of the subject site was within T M Winder's grant. Few improvements occurred on the part of the study site on Winder's land during that time either. The major concerns of Winder and his partners focused on the resource of water used for the mill(s) on the land and they did not seek to develop their grants intensively for agriculture.

The grant of much of the eastern part of site to James Holt, possibly in the 1840s, saw little new impetus to develop the land and by the early 1880s only the western half of Holt's grant was subdivided and improved (see **Figure 7**). The study area was sited within an area indicated as dune and low scrub. It is telling to note that the line of Gardener's Road stopped in this area no doubt hindered by the nature of the scrub and awaiting the levelling of the dune system in this area.

The late 19th and early 20th Centuries, saw much of the sand in this area extracted for building purposes as the suburbs of south Sydney expanded (see **Figure 14**). This was a feature of the expansion and development of much of the Botany/Matraville area.

The available historical evidence indicates that the creation of the racecourse was the first substantial development which covered the study area. The development of the racecourse and the continuation of Gardener's Road, in the early 20th Century, probably resulted in some levelling of some portions of the dunes in the area. However, others were retained and it was noted that the western side of the racecourse retained part of an old dune which enabled many in the public to obtain excellent views of the racing without having to pay for access to the stands.

Development within the racecourse itself between 1906 and WW2 was focussed towards the Gardener's Road gates where stands and jockeys and stewards rooms were located. Apart from these structures the remainder of the ground was open with fence lines and the track itself covering the remainder of the site. The stands represent the most substantial development on the racecourse and the overlay of the study area indicates that part of at least two stands, and an additional structure, lie within the northern portion of the subject site - the area that is now car park and grocers (see **Figure 16**). The stands could potentially be represented

archaeologically as concrete slabs and footings. However it is likely that they were removed during the levelling process associated with the 1960s development.

The occupation of the site in WW2 saw some additional structures (Nissen huts) and tent lines across the site (see **Figures 16 and 18**). The small scale nature of this occupation is unlikely to have left substantial archaeological remains. The reuse of the site for racing and training post war suggests that it was quickly brought back into its previous use and was not largely altered by the occupation of the army between 1940 and 1947.

2.4 Historical Impact Assessment

The most substantial structures on the subject site were the attendance stands built along the Gardener's Road frontage of the racecourse. The 1928 stands area likely to have consisted of concrete slabs and footings, as part of their lower structure. These structures were sited on the northern part of the former racecourse site and some of these fall within the study area. However it is likely that they have been removed during the 1960s development process and the potential for their survival is low.

The remainder of the site saw little substantial development in the 160 years from 1800 to the housing and shopping centre development in the 1960s. Previous structures across the remainder of the site can be typified as insubstantial and readily dismantled and removed. There is little potential for significant features or deposits to be impacted by the proposed development on the subject site.

3. ABORIGINAL ARCHAEOLOGICAL IMPACT ASSESSMENT

3.1 Statutory Considerations

3.1.1 Commonwealth Statutory Considerations

Aboriginal heritage and archaeology in New South Wales is protected by a number of pieces of legislation, including two pieces of Commonwealth legislation, the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and The *Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)*.

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides protection for areas (particularly sacred sites) and objects of particular significance to Aboriginal Australians. As well as providing protection to areas, the Act can also protect objects by *Declaration*.

No Aboriginal sites or places within the study area are currently subject to a Declaration.

The *Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)* provides a statutory framework for protecting and managing significant environmental and cultural heritage places, flora, fauna and environmental communities. The Act establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL) and provides protection for places included in the two lists. The Act also provides protection for those Australian places on the World Heritage List (WHL).

The study area does not include any places of historical heritage value that are listed on the WHL, CHL or the NHL.

3.1.2 Environmental Planning and Assessment Act 1979 (NSW)

The *Environmental Planning and Assessment Act 1979 (EP&A Act)*, together with the *Heritage Act 1977* and the *National Parks and Wildlife Act 1974*, form an integrated system for managing environmental heritage in NSW.

Part 3A

The Proposal is a Project Application submitted under Part 3A of the *Environmental Planning and Assessment Act 1979*.

Under Section 75U 1 (c-d) of the *EP& A Act*, Part 3A Project Approvals do not require approvals, permits and/ or consents of the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977* in relation to Aboriginal or historical heritage, respectively.

Should the Project Approval be subject to a local approval, integrated approvals, permits and/ or consents under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977* in relation to Aboriginal or historical heritage, respectively would apply.

3.1.3 National Parks & Wildlife Act 1974 (NSW)

The *National Parks & Wildlife Act 1974* (NPW Act) is State legislation that provides blanket protection for Aboriginal objects (material evidence of indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community) across NSW. 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.

An Aboriginal place is any place declared to be an Aboriginal place by the Minister for Climate Change and the Environment, under Section 84 of the Act.

It is an offence, except in Part 3A Project Approval contexts and some other contexts, to disturb Aboriginal objects or places without a permit authorised by the Office of Environment and Heritage (OEH). In addition, anyone who discovers an Aboriginal object is obliged to report the discovery to OEH.

OEH maintains the Aboriginal Heritage Information Management System (AHIMS), a database of registered Aboriginal objects and places and other heritage values in NSW. A search of AHIMS was carried out on 17 February 2012. Details of this search are provided in Section 3.5.1 and attached in Appendix 1.

3.2 Aboriginal Community Consultation

Informal Aboriginal community consultation was undertaken with the La Perouse Local Aboriginal Land Council (LALC) as stakeholders for the subject site. No Native Title Claimants for the subject site were identified.⁹

Shane Ingrey from La Perouse LALC attended a site inspection and provided verbal comments regarding the cultural significance of the subject site. These verbal comments are outlined in Section 3.6.

3.3 Landscape Context

3.3.1 Background

Archaeological assessment reports include information about the environmental context of their study areas because of the important role environmental characteristics played in influencing the types of archaeological sites in any given area. Physical environments influenced both the type and availability of natural resources and the types of cultural activities that were carried out in the past. As a result, this also influenced the types of archaeological sites that may be found. A determination of the former environmental context is essential to develop accurate models of cultural activity, site distribution patterns and the archaeological potential of any given area. The environmental context of the study area is discussed below.

3.3.2 Geology Soils

The subject site is located within the Tuggerah soil landscape (Chapman et al 1989). The Tuggerah soil landscape (Chapman and Murphy, 1989:94-96) is part of the Botany Lowlands dune system (see Figure 23). The landscape is characterized by gently undulating plains to rolling rises of broad, level to very inclined swales and dunes.

The soil landscape consists of Holocene and Pleistocene wind blown, fine to medium grained sand. Shell fragments are absent and the sand appears to be finer grained than sands found on the fore dunes of nearby beaches.

A summary of the typical soil profile found within the Tuggerah soil profile is outlined below:

⁹ Search of Native Title Tribunal website undertaken 01.03.2012.

- The topsoil (A1 Horizon) consists of a loose speckled loamy sand with organic fragments (charcoal flecks, roots). Stone nodules are absent in this layer.
- The topsoil overlies bleached loose sand (A2 horizon). The A2 horizon is light grey to grayish yellow in colour and stones and organic matter are rare.
- The A2 horizon overlies a mottled sand or loamy sand, which typically occurs in areas of poor drainage and can be waterlogged.
- The mottled sand overlies a black soft organic pan layer that generally has a soft, sandy consistency (the B horizon). This soil layer is comprised of quartz sand and black organic compounds, stones and charcoal. Roots are absent. The B horizon is often hard setting on exposure.
- The black organic pan layer overlies a brown soft sandy iron pan. This layer consists of stained sand to a loamy sand and is also known as 'coffee rock' due to its colour and consistency; and
- A yellow massive sand underlies the 'coffee rock' layer. The layer consists of yellow-orange sand to clayey sand and occurs as deep subsoil.

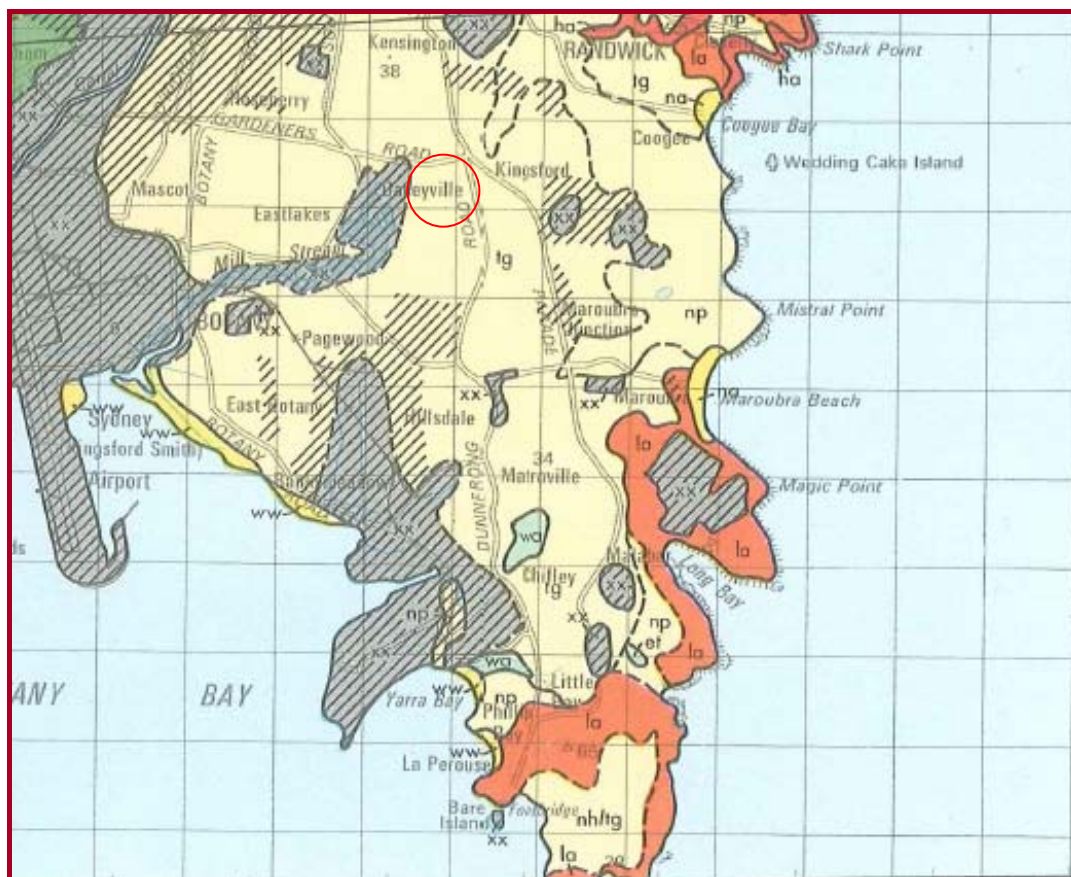


Figure 23. The approximate area of the subject site (as indicated by red circle) within the Tuggerah Soil Landscape. (Source: Chapman et al, 1989 Soil Landscape of the Sydney 1:100,000 sheet.)

Chapman and Murphy do not provide a lower limit for the depths and ages of the dune sands. They indicate that the soil profile can be deep (greater than 200cm) and consists of several layers formed over time. The depth of the layers varies depending on the location of within the dune system (for example swales or dune slopes).

Although the site has been modified due to historic activities, historical maps indicate the subject site was situated within a former sand dune, oriented north-south. An 1881 geological map of Sydney indicates the subject site is situated in an area of a former dune crest and the vegetation in this area is characterized as 'thick scrub' (see Figure 24). The dune shown in Figure 24 most likely dates to the Holocene period.

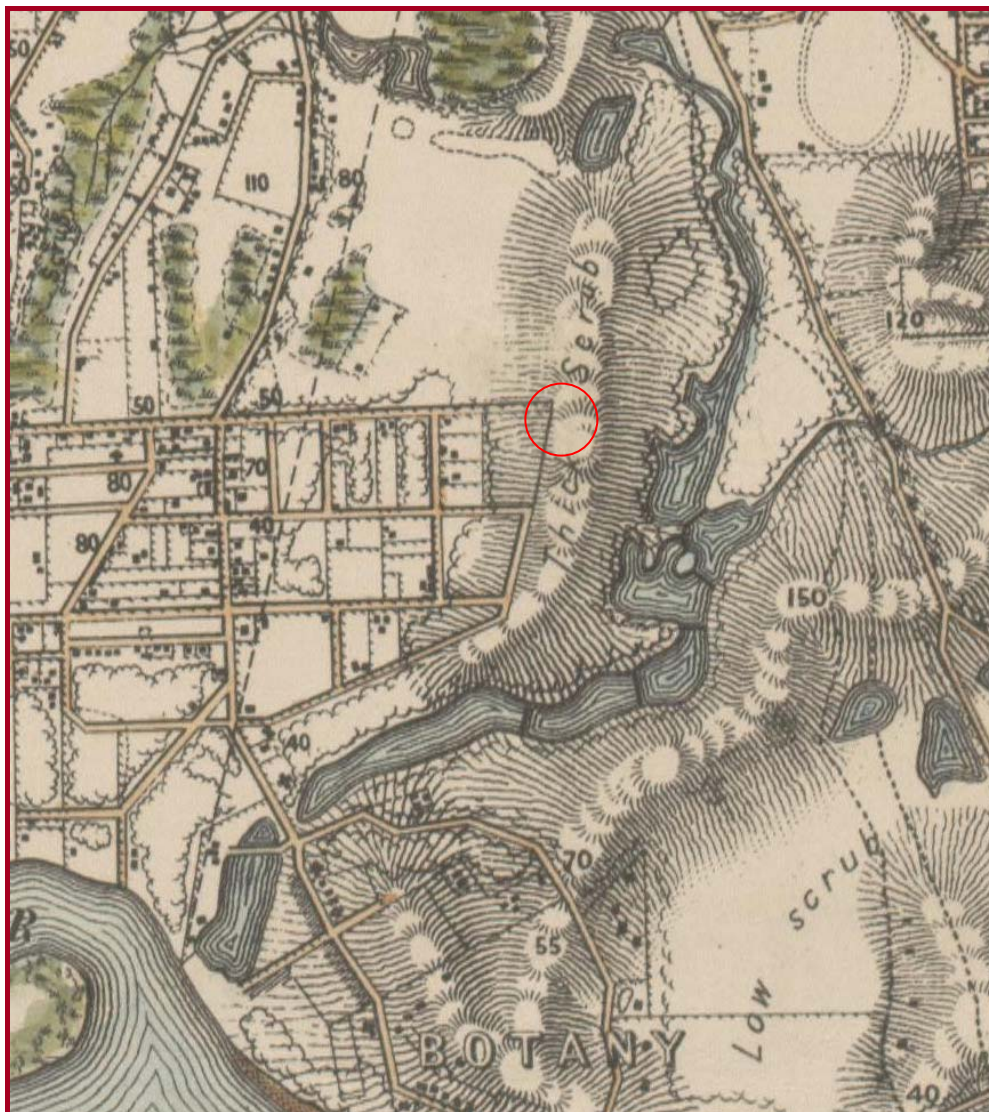


Figure 24. An 1881 Map of Sydney with a red circle indicating the location of the subject site. At this time, the site was in or near a dune crest with 'thick scrub'. (Source: NLA, 'Map of the country around Sydney, 1881 [cartographic material] / from a reconnaissance by Lieut. Parrott, Volr. Engineers; under the direction of Col. P. Scratchley R.E., C.M.G. ; and by authority of P.F. Adams, Esq., Surveyor General, N.S.W.' Call No. MAP RM 903).

3.3.3 Vegetation

The original vegetation in the area has been cleared due to subsequent historical developments. Chapman and Murphy (1989) indicate the vegetation in the Tuggerah soil landscape would have formerly consisted of dry sclerophyll eucalypt and apple woodland. Dominant tree species would have included smooth barked apple (*Angophora costata*), Sydney peppermint (*Eucalyptus piperita*) and old man banksia (*Banksia aemula*).

A shrubby sclerophyllous understorey would have contained bracken (*Pteridium esculentum*) Christmas bush (*Ceratopetalum gummiferum*) and woody pear (*Xylomelum pyriforme*). Figure 24 indicates the area was characterized by 'thick scrub' in 1881 and may have included many of these species.

3.3.4 Watercourses

The subject site is located in a heavily modified urban landscape, however, evidence of water courses (and former water courses) are evident in the vicinity. The subject site is located adjacent to the Lachlan Swamps (to the east of the site). The Lachlan Swamps, also known as the Botany Wetlands, was formerly a network of fresh water marshland that extended from what is now known as Botany Bay to Centennial Park. To the west of the site, Shea's Creek (now the Alexandra Canal) was a tributary of the Cooks River. Research indicates that Shea's Creek was a tidal swamp with salt marshes during the Holocene period (Haworth et al, 2004).¹⁰

Other water resources in the area include Botany Bay to the south and the coastal fringe to the east. Evidence in the vicinity of the subject site indicates that during phases of higher sea levels, Botany Bay extended further inland than its present location.

3.3.5 Historical Land Use and Disturbance

The historical section (Section 2.1-2.2) of this report identifies the original landscape of the subject site has been subject to significant modification during the historical period.

Historical evidence indicates that few developments occurred at the subject site during the 19th century, with the exception of clearing of existing vegetation which would have likely resulted in the disturbance of the soil profile in some parts of the existing dunes in the area. Sand mining often occurred in the Botany Bay area however, there is not direct evidence this type of activity occurred at the subject site.

Modification of the landscape and ground surface of the subject site occurred during the early 20th century when the subject site was part of a race course. The construction and use of the race course would have resulted in excavation, levelling and and re-deposition of the soil profile.

¹⁰ Haworth, R.J., Baker, R.G.V and Flood, P.J. *A 6000 Year-old Fossil Dugong from Botany Bay: Inferences about Changes in Sydneys Climate sea Levels and Waterways*. Australian Geographical Studies 42(1):46-59

The 1960s land subdivision of the race course and subsequent re-development of the Eastlakes shopping Centre and surrounding residential area would have required modification of the ground surface. The construction of the buildings and car parking levels would have required excavation, levelling and removal and/or re-deposition of soils at the subject site. Figure 21 shows the exposed soil at the subject site prior to development of the area.

3.4 Regional Character

This section discusses the regional and local archaeological context within which the study area is situated. For the purposes of determining settlement and site location patterns, archaeologists examine regional and local trends in the distribution of known sites in relation to environment and topography. This provides evidence about economic and social systems in the past and also assists archaeologists in predicting likely site types, site locations and the nature of the archaeological resource in any given area.

3.4.1 Regional Context

The study area falls within the Cumberland Plain region. The archaeology of the region has been well documented through a large number of academic studies, regional management studies and impact assessment investigations over the past 30 years. The Cumberland Plain is the most intensively investigated archaeological landscape in Australia.

The dominant site types in areas of Hawkesbury sandstone in the Sydney region include rock shelters with midden deposit, rock shelters with art, rock art engravings and open artefact scatters¹¹ and to a lesser extent rock shelters with artefacts, grinding grooves and open middens¹². Sites within dune systems and Quaternary alluviums in the Sydney region typically include artefact scatters, hearths, middens and burials. The distribution, density and size of sites is largely dependent on environmental context. For instance, middens are found in close proximity to marine, estuarine and less often, freshwater bodies. Rock shelters are only found in areas of exposed sandstone escarpment and grinding grooves are found on areas of exposed flat bedded sandstone near a source of water.

3.4.1.1 Early Occupation

Aboriginal occupation in the region dates back well into the Pleistocene period (i.e. before 10,000 years ago). This evidence comes from radiocarbon dates retrieved from excavated sites at Cranebrook Terrace (41,700 years before present

¹¹ Attenbrow, V., 2002, p.49

¹² ibid

[BP]), Shaw's Creek K2 (14,700 BP), and George & Charles St Parramatta (c.25,000 – 30,000 BP)¹³. Other sites include Burrill Lake and Bass Point on the south coast with dates >15,000, and Loggers Shelter and Tempe House, the latter a hearth on Cooks River, both dating to early Holocene (5-10,000 years BP).¹⁴ More recently, AHMS has recently obtained ages of between 12, 000 – 15,000 years BP for PT12, an artefact scatter within a sand dune overlooking Hawkesbury River in Pitt Town .¹⁵

The dating of Cranebrook Terrace has been widely criticised, but has never been withdrawn from publication, and they are still considered the earliest in Sydney. It is, however, considered that the George and Charles Street site is the oldest reliable date for Aboriginal occupation in the Sydney region, although these dates similarly have interpretation issues.

The early occupation sites dating to the late Pleistocene /early Holocene have been found in deep stratified rockshelter deposits and within alluvial deposits, particularly on the margins of large rivers such as the Hawkesbury-Nepean and Parramatta Rivers. Drawing on this evidence, McDonald has recently argued that early occupation of the Sydney basin was focused on these primary river systems and characterised by a high degree of 'residential mobility' between a small number of sites (McDonald, 2008). However, the survivability and taphonomic loss of older sites in such a heavily urbanised environment must also be considered (Surovell et al. 2007) with these areas receiving only minimal impact from the coastal plains for example.

3.4.1.2 Intensification During the Holocene

The vast majority of dated sites in the Sydney region are less than 5,000 years old (35 out of a total of 48 dated sites). It has been argued that this is a result of increased populations and 'intensification' of cultural activity during this period. The prevalence of sites dating to the last 5,000 years may also be a result of the last significant rise in sea level, approximately 6,000 years ago. The sea level rise would have submerged many of the older sites along the coastal fringe and forced Aboriginal groups westward to the current coastline.

¹³ Jo McDonald Cultural Heritage Management Pty Ltd, 2005; Kohen et al., 1984; Nanson et al., 1987

¹⁴ Attenbrow, 1987; Bowdler, 1984; Lampert, 1971; Jo McDonald Cultural Heritage Management Pty Ltd, 2006a

¹⁵ AHMS, 2010

3.4.1.3 Regional Site Patterns

A study of the regional archaeology of the Cumberland Plain by Dr Jim Kohen made a number of findings about site location patterns in the Sydney area. The study demonstrated that proximity to water was an important factor in site patterning. Kohen found that 65% of open artefact scatter sites were located within 100 metres of permanent fresh water¹⁶. Only 8% of sites were found more than 500 metres away from permanent fresh water. In short, Kohen argued that open artefact scatters are larger, more complex and more densely clustered along permanent creek and river lines. Kohen's study also found that Silcrete (51%) and Chert (34%) are the most common raw materials used to manufacture stone artefacts¹⁷. Other raw materials include quartz, basalt and quartzite.

Although the patterns described above have been generally supported by subsequent investigations, Kohen's study was limited by a reliance on surface evidence. Extensive excavation across the Cumberland Plain has since shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces. In a 1997 study of the Cumberland Plain, McDonald¹⁸ found that:

- 17 out of 61 excavated sites had no surface artefacts prior to excavation;
- The ratio of recorded surface to excavated material was 1:25; and
- None of the excavated sites could be properly characterised on the basis of surface evidence. In short, surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material.

The results of McDonald's study clearly highlight the limitations of surface survey in identifying archaeological deposits in the Cumberland Plain.

3.4.1.4 Stone Artefacts

Aboriginal stone artefacts are an important source of archaeological information because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres decay. Stone artefacts provide valuable information about technology, economy, cultural change through time and settlement patterning. Stone has also been used for 'relative' dating of sites where direct methods such as Carbon dating cannot be applied. A technological sequence for stone artefacts for the region was first described in the late 1940s by Fred McCarthy and has since been refined over time¹⁹. Known as the 'Eastern Regional

¹⁶ Kohen, J., 1986, p.229-275

¹⁷ Ibid: 280-281

¹⁸ McDonald, 1997.

¹⁹ The ERS is currently being re-examined by Hiscock & Attenbrow.

Sequence' it was based on direct dating of excavated sequences. Some debate about the precise nature and significance of the technological changes described still continues²⁰, therefore the ERS should be regarded only as a general guide to technological change. The ERS phases are as follows:

- Capertian - is distinguished by large uniface pebble tools, core tools, horsehoof cores, scrapers and hammerstones. Backed artefacts occasionally present. Generally dates to before 5,000 years before present (BP).
- Early Bondaian - Aspects of the Capertian assemblage continue, but backed artefacts and ground-edged artefacts increase. Artefacts during this period were predominantly made from fine-grained silicious stone such as silcrete and tuff. Generally dated from 5,000 BP to 2,800 BP.
- Middle Bondaian - Characterised by backed artefacts, particularly Bondi Points and ground-edged artefacts. Artefacts made from silicious materials, however quartz becomes more frequent. Generally dated from 2,800 BP to 1,600 BP.
- Late Bondaian - characterised by bipolar technology, eloueras, ground-edged artefacts, and bone and shell artefacts. Bondi points are virtually absent and artefacts are predominantly made from Quartz. Generally dated from 1,600 BP to contact.

3.5 Local Context

This section provides a brief summary of archaeological investigations in the local area to provide an indication of local site patterning, the nature of the local archaeological resource and previous management approaches that have been recommended.

Chifley Sports Reserve, Chifley²¹

In 2011, Comber Consultants undertook an Aboriginal Heritage Assessment of proposed upgrades at Chifley Sports Reserve, Chifley on behalf of Randwick City Council. The sports reserve is located approximately 5 km south east of the subject site and is located within the Tuggerah, Newport and Lambert soil landscapes (all part of the Botany Lowlands dune system). These soil landscapes comprise of Holocene and Pleistocene period dune systems which were indicated as having Aboriginal archaeological sensitivity.

²⁰ Hiscock, P. & V. Attenbrow, 2002; Hiscock, P. & V. Attenbrow, 1998.

²¹ Comber Consultants, May 2011.

The assessment indicated that the site had been used as an area for sand mining in the 20th century. Historical evidence indicated that sand was mined a great depth and the site was filled with land fill prior to the development of Chifley Reserve. The assessment concluded that the site had no Aboriginal archaeological potential due to the removal of soils due to sand mining and that the proposed upgrades at the site would disturb land fill that had no Aboriginal archaeological potential.

Georges River Program - Sewerage Treatment Plants²²

Navin Officer Heritage Consultants undertook an assessment for a proposed sewer pipeline which covered a linear transect adjacent to the subject site (along Gardeners Road).

The assessment identified a Potential Archaeological Deposit (PAD) was located at the Botany Wetlands, to the south east of the subject site. The PAD was located in an area identified as a elevated area within a dune field between Southern Cross Drive and Mill Stream in the Eastlakes Golf Club. The PAD was a remnant natural landscape that may have been repeatedly occupied by Aboriginal people in the past.

The assessment identified that there was potential for areas of intact remnant soil landscapes to survive in areas that have been highly modified due to historical land uses and recent residential developments. The remnant soil landscapes with potential for Aboriginal archaeological resources to survive in the Eastlakes area would most likely comprise of elevated sand dunes. It was noted that due to urbanisation, it is difficult to ascertain the earlier topography of the area and the potential locations of intact elevated sand dunes.

Botany Wetlands Study²³

In 1991, Crew undertook an Aboriginal archaeological survey of the Botany Wetlands (to the east of the subject site). The study area included the Eastlakes golf course, Lachlan Swamps and Mill Stream. The survey identified that there was high levels of historical disturbance across the Botany Wetlands that would have destroyed Aboriginal archaeological sites across the majority of the study area.

Two areas of Aboriginal archaeological sensitivity were identified, and comprised of relatively intact sand dunes and sand bars. These remnant areas of elevated ground, adjacent to water and other resources, were considered highly likely to retain Aboriginal archaeological sites.

²² Navin Officer Heritage Consultants, March 2003.

²³ Crew, 1991

However the report also identified that an Aboriginal cranial bone had been discovered within disturbed dune systems in the area in 1982.

The assessment considered there was the potential for middens, burials and artefact scatters to survive intact within parts of remnant dune systems in the Eastlakes area.

Prince of Wales Hospital²⁴

A historical and Aboriginal archaeological assessments and excavations were undertaken by Godden Mackay Logan (GML) and Austral at the Prince of Wales Hospital Destitute Children's Asylum Cemetery in 1997, located to the east of the subject site.

The assessment identified that the site had been modified during the historical period for the construction of the hospital which would have removed and/or disturbed the existing soil profile at the site. Historical archaeological excavations were undertaken and it was identified that the depth of disturbance (due to the construction of the hospital) was shallow across many parts of the site.

An Aboriginal heritage assessment identified that intact dune systems and soil profiles were likely to survive below the historical disturbance layers at the Prince of Wales site, and that these systems and soil profiles had the potential to contain Aboriginal archaeological sites and/or objects.

Aboriginal archaeological excavations at this site revealed that Aboriginal archaeological sites and objects survived beneath the historical disturbance layers. One of the sites was an intact hearth which comprised of over thirty sandstone cobbles and charcoal fragments, and was dated to c. 7, 800 years ago.

Alexandra Canal

Prior to canalisation in the 1890s the Alexandra Canal, located to the west of the subject site, was formerly a creek (known as Shea's Creek).

Geologists recorded the depositional strata exposed by the excavation for the canal between Ricketty Street and Campbell Street.²⁵ Excavations revealed two stone axes and the butchered bones of a dugong (*Dugong dugong*) in a layer towards the base of the canal. The dugong bones were located in the vicinity of Ricketty Street (at a depth of 1.3-2.3 m below low water level) and the stone axes were located north of this location in the canal.

²⁴ Godden Mackay Logan and Austral, 1997.

²⁵ Etheridge et al, 1896.

Etheridge et al reached several significant conclusions in regarding the cultural and natural history of Botany Bay and the east coast of Australia from their study. They identified that there was a change in sea level and the type of environment during the recent geologic period due to the movement of land and/or sea levels and that the area was inhabited by Aboriginal people prior to changes in the environment.

More recent analysis of the dugong bones indicates that the bones were approximately 6,000 years old.²⁶ The analysis indicated that c 6,000 years ago the Alexandra Canal had higher sea levels than present and the environment was able to support warm-water marine species.

3.5.1 AHIMS Search Results

A search of the Aboriginal Heritage Information Management System (AHIMS) database, maintained by OEH, was carried out on 17 February 2012. No registered sites were identified within the subject site or within a 1 km radius of the subject site (see **Appendix 1**).

No AHIMS sites are recorded within the study area or within 1 km of the study area.

3.6 Aboriginal Archaeological Potential

Based upon information compiled within the OEH AHIMS and background data (including archaeological context, landscape and geomorphological information) reviewed above, a number of conclusions can be made about the potential Aboriginal archaeological resources of the subject site in the past.

Background information indicates that Aboriginal site types typically found in dune systems may include Aboriginal burials, middens, hearths, artefact scatters and potential archaeological deposits (PADs). The PADs would likely be associated with surviving Pleistocene and Holocene dune systems that are part of the Tuggerah soil landscape.

In addition, according to OEH guidelines, particular landscape features can indicate the likely existence of Aboriginal objects. As a general guide, this includes land that is not disturbed and is located in one or more of the following situations:

- “Within 200m of waters,
- Within a sand dune system,

²⁶ Haworth et al 2004.

- On a ridge top, ridge line or headland,
- Within 200m below or above a cliff face,
- Within 20m of or in a cave, rock shelter, or a cave mouth"²⁷

The subject site is located within a fully or partially disturbed (see **Section 3.3.5**) sand dune system and is likely to have been within 200 m of water systems in the past (e.g. the Lachlan Swamps).

The local archaeological context indicates that several studies have been undertaken in the local area within the Lower Botany Dune system, in which the subject site is located. The oldest Aboriginal archaeological site to be identified in the area was a hearth at the Prince of Wales site (dating to the early Holocene period).

The studies identified that potential Aboriginal archaeological objects and/or sites are most likely to survive in intact soil profiles, particularly in remnant elevated areas. However, it was noted that the majority of the local area had been modified due to historical activities, such as sand mining and urbanisation that resulted in the removal of original soil profiles (which were most likely to contain Aboriginal objects).

It was noted that some study areas assessed as disturbed due to historical land uses were also identified as having some Aboriginal archaeological potential. It was identified that the historical disturbance in these areas was shallow (<2 m) or in areas where the soil profile had not been substantially modified (such as in parts of golf courses). It was concluded that in highly urban areas, it was difficult to determine the original topography of the area and the potential for remnant soil profiles (whether of Holocene or Pleistocene ages) to survive below the existing ground surface.

²⁷ OEH, Sept 2010, p. 12

3.6.1 Aboriginal Archaeological Potential and Survival

The following summary of Aboriginal archaeological potential and survival at the subject site is based on the existing environmental information, archaeological context, landform criteria outlined by OEH and land use history.

Background information indicates the subject site was in an area that would most likely have been used by Aboriginal people in the past. The subject site is located in the vicinity of fresh water wetlands and coastal systems that would have provided abundant resources to Aboriginal people in the past. Historical maps indicate that the subject site was in an elevated area in the late 19th century on a north-south oriented dune overlooking the Botany wetlands, which is identified as a typical landform to be frequented by Aboriginal people. In addition, it is known that the subject site was situated in a variable environment, due to the movement of dunes and changing sea levels over time.

The subject site is located within a soil landscape that is characterised as comprising of Holocene and Pleistocene sand dune systems. The environmental and archaeological contexts indicate that the depth, age and location of the former Pleistocene and Holocene dune systems in the local area are not fully known but they can reach >2 m below surface.

A land use history has identified that the subject site has been disturbed due to historical activities (particularly the construction and use of the site as part of a race course and subsequently as a shopping centre). It is highly likely that these activities would have removed original soil profiles where Aboriginal objects are most likely to occur. The soils removed by this historical land uses most likely date to the Holocene period (the most recent period).

There is the potential for older soil profiles to occur intact below the level of historic disturbance at the subject site as the extent of disturbance below the existing ground surface at the subject site is not fully known. These soil profiles often occur at depth and may have survived landscape modification during the historical period. Aboriginal archaeological objects and/or sites may be found within intact Pleistocene period sandy soil profiles.

During the site inspection, Shane Ingrey (La Perouse LALC representative) agreed with the above interpretation of the archaeological potential of the site. Should any Aboriginal archaeological sites be discovered at the subject site, they would be considered to be of cultural significance to the Aboriginal community. No written comments have been received regarding the site from La Perouse LALC as of 24 April 2012.

3.7 Impact Assessment

It is highly likely that the subject site has been disturbed and Aboriginal archaeological sites and/or objects, particularly of Holocene age, are unlikely to survive. However, there is some potential for Aboriginal archaeological sites and/or objects to occur in Pleistocene period sand deposits (should they exist) at the subject site. These sites generally occur at depth. However, the presence and depth of intact soil profiles and depths of disturbance at the subject site is not known.

The proposed development would require excavation for installation of services, one new basement level below the existing Eastlakes shopping centre site and two new basement levels below the northern part of the site between Gardeners Road and Evans Avenue.

The proposed development may impact Aboriginal archaeological sites and/or objects, should intact soil profiles exist at the subject site. Should potential Aboriginal objects and/or sites date to the Pleistocene period, they would be considered to have high cultural and scientific significance.

4. CONCLUSIONS & RECOMMENDATIONS

4.1 Historical Heritage

4.1.1 Conclusions

1. The subject site saw no substantial development between the beginning of European settlement and the early part of the 20th Century;
2. The first substantial development of this area of Eastlakes was the creation of Rosebery Racecourse in 1906.
3. This area was also subject to extensive sand extraction for growing suburb development in the early decades of the 20th Century;
4. Development within the racecourse was focussed on the northern (Gardener's Road) boundary and consisted at various times of stands and small scale buildings such as jockey's and steward's rooms.
5. The post 1928 stands were probably constructed on concrete slabs and footings.
6. The subject site was occupied in both World Wars by the Australian Army;
7. Development during WW2 was of low scale and readily dismantled structures;
8. It is unlikely that any substantial features or significant deposits associated with the use of the racecourse remains as archaeological relics on the subject site.

4.1.2 Recommendations

9. No further action is required in relation to potential historical archaeological remains on the subject site prior to commencement of development; however
10. Should any potential archaeological features deposits or other artefacts be exposed during the development work then an archaeologist should be notified and advice sought regarding the nature and significance of the find.
11. Statement of Commitments should be prepared that incorporate recommendations (point 10) above.

4.2 Aboriginal Heritage

4.2.1 Conclusions

1. It is unlikely that Aboriginal objects and/or sites survive at the subject site due to historical land uses at the site; however,
2. As the soil profile beneath the subject site is not fully known, there is the potential for older (Pleistocene period, c.50,000 to 10,000 years ago) soil profiles to survive intact. These deposits occur at depth and have the potential to contain Aboriginal sites and/or objects.
3. Pleistocene period Aboriginal archaeological sites and/or object, should they exist at the subject site, would be considered to have high scientific and cultural significance.
4. Informal consultation was undertaken with the La Perouse Local Aboriginal Land Council (LPLALC). LPLALC indicated that Aboriginal archaeological objects and/or sites have cultural significance to the local Aboriginal people, in particular Aboriginal burial sites, which can occur in sandy deposits, have high cultural significance to Aboriginal people;
5. The proposed development may impact Aboriginal sites and/or objects should intact soil profiles exist at the subject site.

4.2.2 Recommendations

It is recommended, subject to Project Approval under Part 3A, that:

6. An archaeologist should be engaged to prepare briefing documents and a monitoring plan that would apply to the excavation of the subject site during development works. The plan should specify when and how monitoring should occur and in what locations at the subject site.
7. The briefing document should identify, explain and illustrate the likely nature of the potential archaeological resource of the subject site. The briefing document should be distributed to work crews and project managers prior to ground disturbance and explained by an archaeologist at toolbox meetings.

8. Should any Aboriginal objects and/or sites be uncovered during the development works work should cease and the archaeologist should assess nature and significance of the find.
9. Aboriginal community consultation, salvage and/or collection of artefacts may be required should any Aboriginal archaeological sites and/or object be identified during development works. Consideration of timeframes and costs should be considered by the Proponent during approval process.
10. Statement of Commitments should be prepared that incorporate recommendations (point 6-9) above.

Please note,

- In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and the client should determine the subsequent course of action in consultation with a heritage professional, relevant Aboriginal community groups and/or the relevant State government agency as appropriate; and
- Should suspected Aboriginal skeletal material be identified, all works should cease and the NSW Police and the NSW Coroner's office should be contacted. Should the burial prove to be archaeological, consultation with a heritage professional, relevant Aboriginal groups and/or the relevant State government agency, should be undertaken by the client.

5. REFERENCES

- Archaeological Management Consulting Group Pty Ltd, December. 1997. Aboriginal heritage Survey Surplus Land Adjoining Australia's Wonderland, Eastern Creek NSW. *Unpublished report for Gutteridge Haskin & Davey Pty Ltd.*
- Attenbrow, V., 2002. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. UNSW Press, Sydney.
- Attenbrow, V., 2006. What's Changing: Population Size or Land-Use Patterns? The Archaeology of Upper Mangrove Creek, Sydney Basin. In *Terra Australis* 21. Canberra: ANU Press.
- Australia ICOMOS, 1988. *The Burra Charter*
- Australian Heritage Commission. *Register of the National Estate*.
- Benson, D and Howell, J, 1995, *Taken For Granted*, Kangaroo Press.
- Bickford, A. and Sullivan, S. 1984. "Assessing the Research Significance of Historic Sites" in Sullivan, S. and Bowdler, S. *Site Surveys and Significance Assessment in Australian Archaeology*. Department of Prehistory, Research School of Pacific Studies, Australian National University, Canberra.
- Bowdler, S. 1984. *Hunter Hill, Hunter Island*. Terra Australis 8. Canberra: Department of Prehistory, Research School of Pacific Studies, Australian National University.
- Chapman, G. and Murphy, C. 1989. *Soil landscapes of Sydney-1:100 000 Sheet*. Soil Conservation Services, NSW.
- Comber Consultants, May 2011. *Aboriginal archaeological and Cultural Heritage Assessment- Chifley Sports Reserve, Chifley*. Report to Complete Urban Pty Ltd on behalf of Randwick City Council.
- Construction Review, August 1967.
- Crew, D. 1991. Archaeological Survey for Aboriginal Sites of the Botany Wetlands, Sydney NSW. Report prepared for the Federal Airports Co-operation and the NSW Water Board.
- Dickson, F.P 1979. *Aboriginal Midden at Phillip Monument Site, Yarra Bay* for NPWS

Elizabeth Rich, 1986. Yarra Point Site 45-6-292. Archaeological Investigation. Unpublished report prepared for Randwick Municipal Council.

Etheridge, R. David, E. and Grimshaw, J. 1896 '*On the occurrence of a submerged forest, with the remains of a dugong, at Shea's Creek near Sydney*' Journal and Proceedings of the Royal Society of New South Wales Vol 30.

Godden Mackay Heritage Consultants and Asural Archaeology, 1997. *Price fo Wales Project 1995. Randwick Destitute Children's Asylum Cemetery- Aborginal Archaeology*. Report Prepared for the South Eastern Sydney Area Health Service, Heritage Council of NSW and NSW Department of Health.

Haworth, R.J., Baker, R.G.V., Flood, P.J. 2004. '*A 6000 Year Old Fossil Dugong from Botany Bay: Inferences about Changes in Sydney's Climate, Sea Levels and Waterways*' Australian Geographical Studies 42(1): 46-59.

Hiscock, P. & V. Attenbrow, 2002. *Morphological and Reduction Continuums in Eastern Australia: Measurement and Implications at Capertee 3*. Tempus 7, Anthropology Museum, University of Queensland; Hiscock, P. & V. Attenbrow, 1998. *Early Holocene Backed Artefacts from Australia*. Archaeology in Oceania 33(2).

JMCHM. 2006a. Archaeological salvage of a stormwater easement and testing within the State Heritage Register conservation precinct at the former Tempe House, Discovery Point. *Unpublished Report to Auckland Holdings Pty Ltd*.

Kohen, J., 1986. *Prehistoric Settlement in the Western Cumberland Plain: Resources, Environment, Technology*. PhD Thesis, School of Earth Sciences, Macquarie University, Sydney, p.229-275.

Lampert, R.J. 1971. *Burrill Lake and Currarong; coastal sites in southern New South Wales*. Terra Australis 1. The Australian National University, Canberra.

McDonald, J., 1997. *Interim Heritage Management Report: ADI Site St Marys. Volume 1: Text*. Report to Lend Lease - ADI Joint Venture in Response to the Section 22 Committee Interim Report.

McDonald, J., 2005. *Archaeological Salvage Excavation of Eight Archaeological Landscapes in the Second Ponds Creek Valley, Rouse Hill Development Area, NSW*. Report to Rouse Hill Infrastructure Pty Ltd and Landcom.

Navin Officer Heritage Consultants, March 2003. *Georges River Program Stage 2. Proposed recycled water pipeline and overflow abatement works at Glenfield and Liverpool Sewerage Treatment Plants Environmental Impact Statement-*

Assessment of Indigenous Heritage. Technical Paper 16 Part A. On behalf of Sydney Water

NSW Heritage Office and DUAP, 1996. *Archaeological Assessments* (from the 1996 Heritage Manual).

NSW Heritage Office, 1999. *State Heritage Inventory Listings* On Line.

Peake, W, 2006, *Sydney's Pony Racecourses*, Walla Walla Press.

Stanbury, P. & J. Clegg, 1990. *A Field Guide to Aboriginal Rock Engravings with Special Reference to those around Sydney*. Sydney University Press, Sydney.

Sydney Morning Herald

Wittaker, A, 2002, *South Sydney Pictorial History*, Kingscleere.

APPENDIX 1 - AHIMS SEARCH RESULTS

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : Eastlakes 110311-3

Client Service ID : 63322

<u>SiteID</u>	<u>SiteName</u> <u>Contact</u>	<u>Datum</u> <u>Recorders</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u> <u>Permits</u>	<u>SiteTypes</u>	<u>Reports</u>
---------------	-----------------------------------	----------------------------------	-------------	----------------	-----------------	----------------	--------------------	---------------------------------------	------------------	----------------

There are no sites found for given search criteria.

Report generated by AHIMS Web Service on 17/02/2012 for Laura Matarese for the following area at Lot : 3, DP:DP248832 with a Buffer of 1000 meters.Additional Info : in an assessment.

Number of Aboriginal sites and Aboriginal objects found is 0

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Archaeological & Heritage Management Solutions Pty Ltd (AHMS)

Date: 17 February 2012

349 Annandale Street

Annandale New South Wales 2038

Attention: Laura Matarese

Email: lauram@arksolutions.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 3, DP:DP248832 with a Buffer of 0 meters.
conducted by Laura Matarese on 17 February 2012**

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Archaeological & Heritage Management Solutions Pty Ltd (AHMS)

Date: 17 February 2012

349 Annandale Street

Annandale New South Wales 2038

Attention: Laura Matarese

Email: lauram@arksolutions.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 41, DP:DP601517 with a Buffer of 0 meters.
conducted by Laura Matarese on 17 February 2012**

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Archaeological & Heritage Management Solutions Pty Ltd (AHMS)

Date: 17 February 2012

349 Annandale Street

Annandale New South Wales 2038

Attention: Laura Matarese

Email: lauram@arksolutions.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 100, DP:DP700822 with a Buffer of 0 meters.
conducted by Laura Matarese on 17 February 2012**

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.