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# **ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

**74 EDINBURGH ROAD,  
MARRICKVILLE**

Prepared for

**WOOLWORTHS GROUP LIMITED**

12 February 2021

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Project Code	P0026069
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# CONTENTS

<b>Executive Summary.....</b>	<b>1</b>
<b>1. Introduction .....</b>	<b>5</b>
1.1. Proposed Activity .....	5
1.2. Description of Site.....	5
1.3. The Site and the Surrounding Context .....	6
1.4. Project Description .....	6
1.5. Statutory Controls .....	12
1.5.1. Marrickville Local Environment Plan 2011 .....	12
1.5.1. Marrickville Development Control Plan 2011 .....	13
1.6. Objectives .....	14
1.7. Authorship .....	14
<b>2. Archaeological Context .....</b>	<b>17</b>
2.1. Aboriginal Archaeological Background .....	17
2.1.1. Aboriginal Heritage Information Management System.....	17
2.1.2. Regional Archaeological Context .....	21
2.1.3. Local Archaeological Context.....	22
2.1.4. Summary of Previous Archaeological Investigations .....	30
2.2. Geology and Soils.....	31
2.3. Vegetation and Resources .....	31
2.4. Hydrology.....	33
2.5. Landform.....	34
2.5.1. Assessment Framework.....	34
2.5.2. Landform Assessment of the Subject Area .....	36
2.6. Geotechnical Analysis.....	37
2.7. Past Aboriginal Land Use .....	39
2.8. Historical Land Use.....	40
2.9. Predictive Model .....	46
<b>3. Consultation Process .....</b>	<b>52</b>
3.1. Stage 1: Notification of Project Proposal and Registration of Interest.....	53
3.1.1. Government Organisation Contacts .....	53
3.1.2. Registration of Interest .....	53
3.1.3. Newspaper advertisements.....	54
3.2. Stage 2: Presentation of Information About the Proposed Project.....	54
3.3. Stage 3: Gathering Information About Cultural Significance.....	54
3.3.1. Archaeological site inspection and meeting .....	55
3.4. Stage 4: Review of Draft Cultural Heritage Assessment Report .....	57
<b>4. Summary and Analysis of Background Information .....</b>	<b>58</b>
4.1. Summary of Background Information and Results .....	58
<b>5. Cultural Heritage Values and Statement of Significance .....</b>	<b>59</b>
5.1. Methods of Assessing Heritage Significance .....	59
5.2. Assessment Framework .....	59
5.2.1. Social or Cultural Value.....	59
5.2.2. Historic Value .....	59
5.2.3. Scientific (Archaeological) Value.....	60
5.2.4. Aesthetic Value.....	60
5.3. Identifying Values.....	60
5.4. Assessing Values and Significance .....	61
5.4.1. Assessment of Cultural Heritage Significance and Values .....	61
5.4.2. Assessment of Scientific (Archaeological) Significance .....	62
<b>6. Impact Assessment.....</b>	<b>63</b>
6.1. The Proposed Works .....	63

6.2.	Potential Harm .....	65
6.3.	Likely Impacted Values .....	65
6.4.	Consideration of Inter-Generational Equity.....	65
6.4.1.	Cumulative Impact Assessment .....	65
7.	<b>Avoiding and Minimising Harm .....</b>	<b>66</b>
8.	<b>Conclusions .....</b>	<b>67</b>
9.	<b>Recommendations .....</b>	<b>68</b>
10.	<b>Bibliography .....</b>	<b>70</b>
	<b>Disclaimer .....</b>	<b>72</b>

<b>Appendix A</b>	<b>AHIMS Extensive Search Results</b>
<b>Appendix B</b>	<b>Geotechnical Reports</b>
<b>Appendix C</b>	<b>Consultation Documents</b>
<b>Appendix D</b>	<b>Consultation Log</b>

## FIGURES

Figure 1 – Aerial view of the Site/subject area (yellow polygon) with the approximate alignment subsurface canal in red.....	7
Figure 2 - The Site: Location of proposed warehouse and Customer Fulfillment Centre .....	8
Figure 3 – Regional Location.....	9
Figure 4 – Location of the Subject Area .....	10
Figure 5 – Plan of subsurface impacts of proposed works.....	11
Figure 6 – Heritage Conservation Areas (red polygons) encompassed by Marrickville DCP 2011 with approximate location of subject area indicated (yellow point). .....	15
Figure 7 – Historical Heritage Items in the vicinity of the Subject Area.....	16
Figure 8 – Graph showing the results of AHIMS Search for Client Service ID: 526644 .....	18
Figure 9 – Registered AHIMS sites .....	19
Figure 10 – Registered AHIMS sites .....	20
Figure 11 – Lower jaw of Dugong with cut marks, discovered at Shea's Creek, St Peters. ....	22
Figure 12 – Ribs of Dugong with cut marks, discovered at Shea's Creek, St Peters. ....	22
Figure 13 – Location of the Proposed Marrickville dive site for the Sydney Metro City & Southwest with the present subject area indicated by yellow polygon .....	23
Figure 14 – View south-west of Murray Street showing canal .....	23
Figure 15 – View south across Sydenham Drainage Pit and Pumping Station .....	23
Figure 16 – Soil Landscapes and Hydrology.....	32
Figure 17 – ‘Plan of Storm Water Drainage Scheme, Marrickville’ from 1892 with approximate location of subject area indicated by yellow outline .....	33
Figure 18 – Landform types.....	35
Figure 19 – Landform Patterns. ....	36
Figure 20 – Geotechnical investigation location plan .....	38
Figure 21 – 1831 surveyor sketch of the Gumbramorra Swamp area, showing the location of early land grants within the area. ....	41
Figure 22 – Undated Parish map, Parish of Petersham, County of Cumberland. Approximate location of the subject site indicated by red polygon.....	41
Figure 23 – Map from the Public Works Department, 1873-1953, showing the buildings constructed on site, including the Marrickville Margarine Company identified as occupying the Edinburgh Road frontage.....	42
Figure 24 – 1943 aerial of Marrickville, with subject site indicated in red and slit trenches in the north eastern corner. Buildings include saw and tooth roofed factory buildings as well as brick office. ....	42



Figure 25 - Historical Aerial Imagery .....	44
Figure 26 – Exterior of the Marrickville Margarine factory (ca. 1920s), which was formerly located in the subject area .....	45
Figure 27 – Exterior of the Marrickville Margarine factory (1962), which was formerly located in the subject area .....	45
Figure 28 – Shot of RAP site officers within subject area. Aspect north-west .....	56
Figure 29 – Entrance to subject area from Edinburgh Road. Aspect south-west .....	56
Figure 30 – View south-west from north-east corner of subject area.....	56
Figure 31 – View of ex-Flora factory shed. Aspect south-east.....	56
Figure 32 – View of extant large shed in northern portion of subject area. Aspect south-west .....	57
Figure 33 – View of loading bay on north-eastern side of large industrial building in south-western corner of subject area. Aspect south-west .....	57
Figure 34 – Excavation extent plan. Note the proposed bulk excavation areas marked by the red arrows. ....	64

## TABLES

Table 1 – SEARs and relevant report sections .....	5
Table 2 – Marrickville DCP 2011 Aboriginal cultural heritage controls .....	13
Table 3 – AHIMS search results (Client Service ID: 526644) .....	18
Table 4 – Summary of previous Aboriginal archaeological assessments .....	24
Table 5 – Landform Definitions.....	34
Table 6 – Subsurface conditions encountered in the boreholes .....	37
Table 7 – Historical overview .....	40
Table 8 – Analysis of historical aerials .....	43
Table 9 – Indicative process of determining the likelihood of a given site occurring within a subject area.....	46
Table 10 – Predictive Model .....	48
Table 11 – Contacted Organisations .....	53
Table 12 – Stage 1 Consultation – Registration of Interest.....	54
Table 13 – RAP responses to the Stage 2/3 Information Pack .....	55
Table 14 – Stage 3 site inspection roster .....	55
Table 15 – RAP responses to the Stage 4 Draft ACHAR.....	57
Table 16 – Scientific (Archaeological) Value .....	60

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# EXECUTIVE SUMMARY

Urbis has been commissioned by Woolworths Group Limited (the **Applicant**) to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (**SEARs**), and in support of the SSD- 10468 for the design, construction and operation of a warehouse and distribution centre with associated offices at 74 Edinburgh Road, Marrickville (**the Site / subject area**).

The proposed works comprise the following:

- Demolition of the existing buildings, associated structures and landscaping.
- Construction of a two-storey warehouse comprising a speculative warehouse at level 1 (ground level) and Customer Fulfillment Centre (CFC) at level 2.
- Construction of associated offices across five levels to be used by Woolworths in conjunction with the warehouse and CFC.
- Two storey car park adjacent to Edinburgh Road.
- Two storey hardstand loading and delivery area adjacent Sydney Steel Road.
- Private vehicle access from two points on Edinburgh Road.
- Heavy vehicle / loading vehicle access from four points on Sydney Steel Road, and
- Tree removal and landscaping works.

Use of the warehouse will be on a 24-hour, 7-day basis, consistent with surrounding operations.

The ACHAR was prepared the statutory guidelines under the NPW Act including:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) (the Code).
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013* (Burra Charter).

The ACHAR concluded that:

- There are no registered Aboriginal sites located within, or in proximity to, the subject area.
- The nearest registered Aboriginal site to the subject area is AHIMS ID# 45-6-2654, which is located approximately 900m to the south-west adjacent to the same ephemeral waterway as the subject area. It is recorded as a Potential Archaeological Deposit (PAD), although a later publication indicates it is not a site but rather a natural accumulation of shell.
- While the location of previously identified archaeological sites may indicate a likelihood of identification of further archaeological sites in the same area, an absence of sites is not a reliable indicator of low archaeological potential as this may merely reflect a low number of archaeological investigations.
- Archaeological sites can be found on a variety of landscape features throughout the Sydney Basin, with higher frequency in the vicinity of waterways.
- Level of ground disturbance is likely to correlate with the potential for Aboriginal objects and/or sites to be identified, with higher disturbance generally lowering archaeological potential. However, intact archaeological deposits may be found in remnant natural soils beneath historic fill deposits or where the natural soil profile is deep.
- The potential for sub-surface archaeological deposits may exist where there is no visible surface evidence and in areas of ground disturbance.

- Previous archaeological investigations in the vicinity of the subject area confirms that despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments in the vicinity of the subject area indicates that there is likely to be some remaining moderate to high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.

### **Recommendation 1 – Continued RAP Consultation**

The Proponent should continue to consult with the Aboriginal community regarding the project.

### **Recommendation 2 – Further Archaeological Investigation**

#### **Development of Archaeological Research Design (ARD) and Monitoring/Excavation Methodology (MEM)**

Prior to construction subsurface archaeological investigation must be carried out, informed by an Archaeological Research Design (ARD) and Monitoring/Excavation Methodology (MEM), to investigate the identified landscape features and their potential for retaining Aboriginal objects and archaeological resources.

#### **Archaeological Monitoring**

Following the approval of the SSDA and parallel with the commencement of earthworks, during the removal of the existing slab and areas of proposed bulk excavation archaeological monitoring should be undertaken to ensure no potential Aboriginal archaeological deposits are harmed during the works.

The objectives of the archaeological monitoring are the following:

- To confirm the presence or absence of Aboriginal objects and archaeological resources at the selected bulk excavation works within the subject area.
- If present, investigate the nature, spatial and stratigraphical extent and integrity of the archaeological resource.
- Include RAPs in the investigation and gathering of information on any archaeological resources identified through the archaeological excavation.
- Ensure that the development can proceed with minimal risk of harming Aboriginal objects and to ensure the development of a nuanced Chance Find.

### **Recommendation 3 – Archaeological Chance Find Procedure**

In areas identified as having low potential for archaeological resources and for the construction of pylons, although considered highly unlikely, should any archaeological deposits be uncovered during any site works, a chance find procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without following the steps below.
2. Site supervisor, or another nominated site representative must contact either the project archaeologist (if relevant) or DPC to contact a suitably qualified archaeologist.
3. The nominated archaeologist examines the find, provides a preliminary assessment of significance, records the item and decides on appropriate management.
4. Depending on the significance of the find, reassessment of the archaeological potential of the subject area and further archaeological investigation may be required in the form of test or salvage excavation.
5. Works in the vicinity of the find can only recommence upon relevant approvals from DPC.

### **Recommendation 4 – Human Remains Procedure**

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.

4. Management recommendations are to be formulated by the Police, DPC and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

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# 1. INTRODUCTION

## 1.1. PROPOSED ACTIVITY

Urbis has been commissioned by Woolworths Group Limited (the **Applicant**) to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (**SEARs**), and in support of the SSD - 10468 for the design, construction and operation of a warehouse and distribution centre with associated offices at 74 Edinburgh Road, Marrickville (**the Site / subject area**).

The warehouse will be fitted out for the purposes of a speculative warehouse(s) and Customer Fulfillment Centre which will service the inner west and city suburbs.

Specifically, this report addresses the following SEARs:

Table 1 – SEARs and relevant report sections

SEARs Item – 14. Aboriginal and non-Aboriginal Cultural Heritage	Report Section
Identify and describe Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the <i>Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW</i> (OEH 2010), and guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (DECCW, 2011).	Section 5
Consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.	Section 3
Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	Sections 6 & 7

## 1.2. DESCRIPTION OF SITE

The Site is legally described as Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969, commonly known as 74 Edinburgh Road, Marrickville (see Figure 1). The Site has an area of approximately 27,315sqm and has frontages to both Edinburgh Road (north) and Sydney Steel Road (east). For clarification, throughout this assessment the terms the Site and the subject area are considered interchangeable.

The key elements within and surrounding the Site include:

- The Site is located within the industrial area of Marrickville and currently accommodates several large freestanding industrial buildings and associated car parking and loading areas.
- Vehicular access to the Site is via an existing entry and exit driveway at the Edinburgh Road frontage. Access is also available from Sydney Steel Road.

- The Site contains minimal vegetation which is fragmented by buildings and areas of hardstand surfaces. Vegetation is limited to scattered trees and shrubs within the Site and planted within the nature strip.
- Is located within 1km of Sydenham Railway Station, which is currently being upgraded as part of the Sydney Metro Chatswood to Bankstown metro line, and
- The Site is well positioned in terms of access to arterial and main roads, public transport modes of bus and rail, Sydney Airport and the retail centre of Marrickville.

### **1.3. THE SITE AND THE SURROUNDING CONTEXT**

The Site is well positioned in terms of access to arterial and main roads, public transport modes of bus and rail, Sydney Airport and the retail centre of Marrickville. The Site is located on the northern periphery of the Sydenham Precinct which is part of the Sydenham to Bankstown Urban Renewal Corridor, earmarked for significant employment growth.

The Site also forms part of a large industrial precinct bounded by Edinburgh Road to the north, Railway Parade and the railway line to the east, Marrickville Road/the railway line to the south and Meeks Road/Farr Street/Shepherd Street to the west.

The Industrial precinct includes:

- Large free stranding industrial buildings.
- Industrial estates including smaller individual warehouse buildings to the south and east, and
- Manufacturing, freight and logistics uses and includes storage facilities, car smash repairs, warehousing and factories.

The Marrickville Metro Shopping Centre also lies to north of the Site. Residential uses are well separated from the Site to the south and east. The Site is also physically separated from residential dwellings to the north and north-west by Edinburgh Road.

### **1.4. PROJECT DESCRIPTION**

The proposed works comprise the following:

- Demolition of the existing buildings, associated structures and landscaping.
- Construction of a two-storey warehouse comprising a speculative warehouse at level 1 (ground level) and Customer Fulfillment Centre (CFC) at level 2.
- Construction of associated offices across five levels to be used by Woolworths in conjunction with the warehouse and CFC.
- Two storey car park adjacent to Edinburgh Road.
- Two storey hardstand loading and delivery area adjacent Sydney Steel Road.
- Private vehicle access from two points on Edinburgh Road.
- Heavy vehicle / loading vehicle access from four points on Sydney Steel Road, and
- Tree removal and landscaping works.

Use of the warehouse will be on a 24-hour, 7-day basis, consistent with surrounding operations.





Figure 1 – Aerial view of the Site/subject area (yellow polygon) with the approximate alignment subsurface canal in red.  
Source: Six Maps

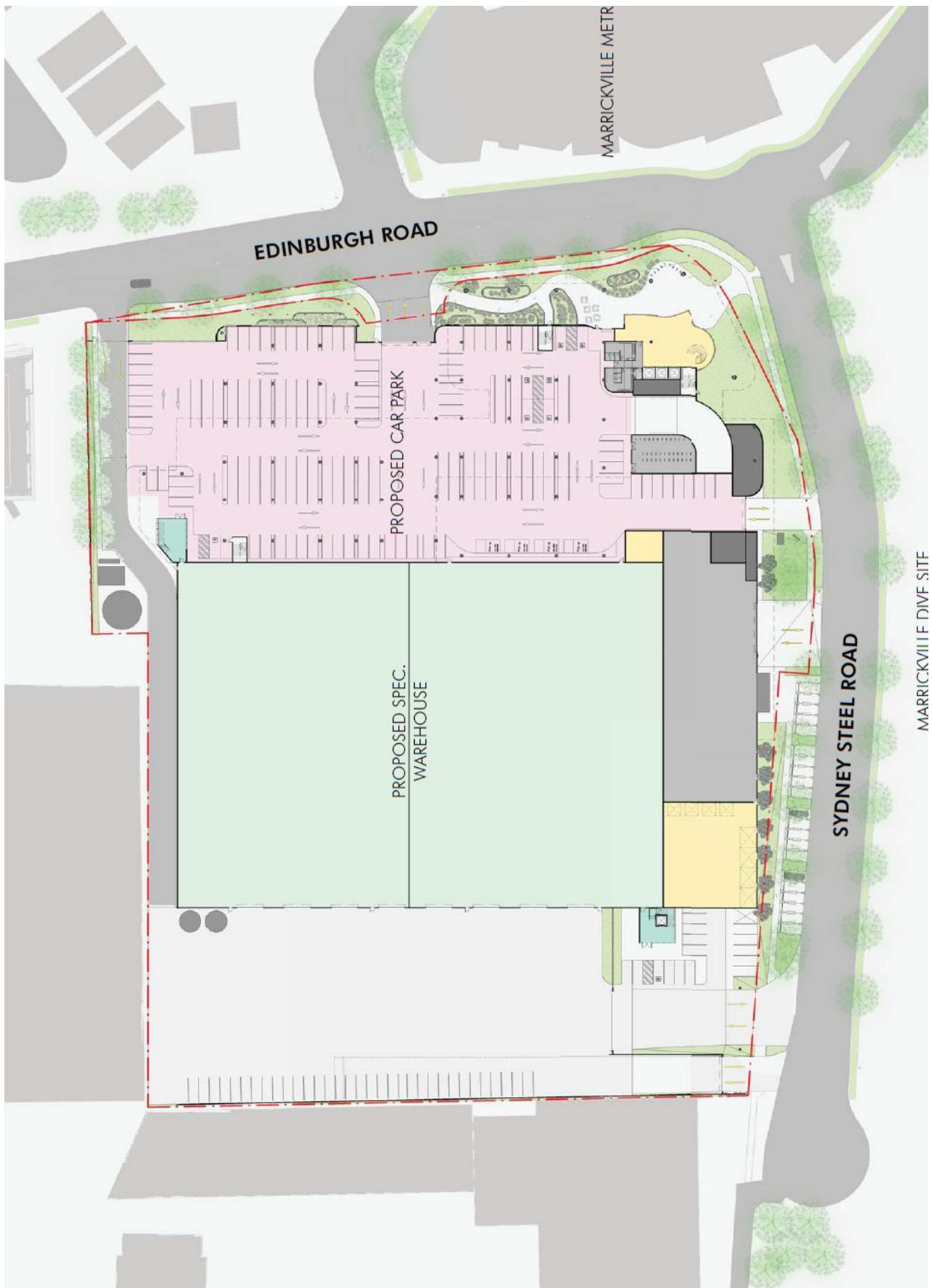
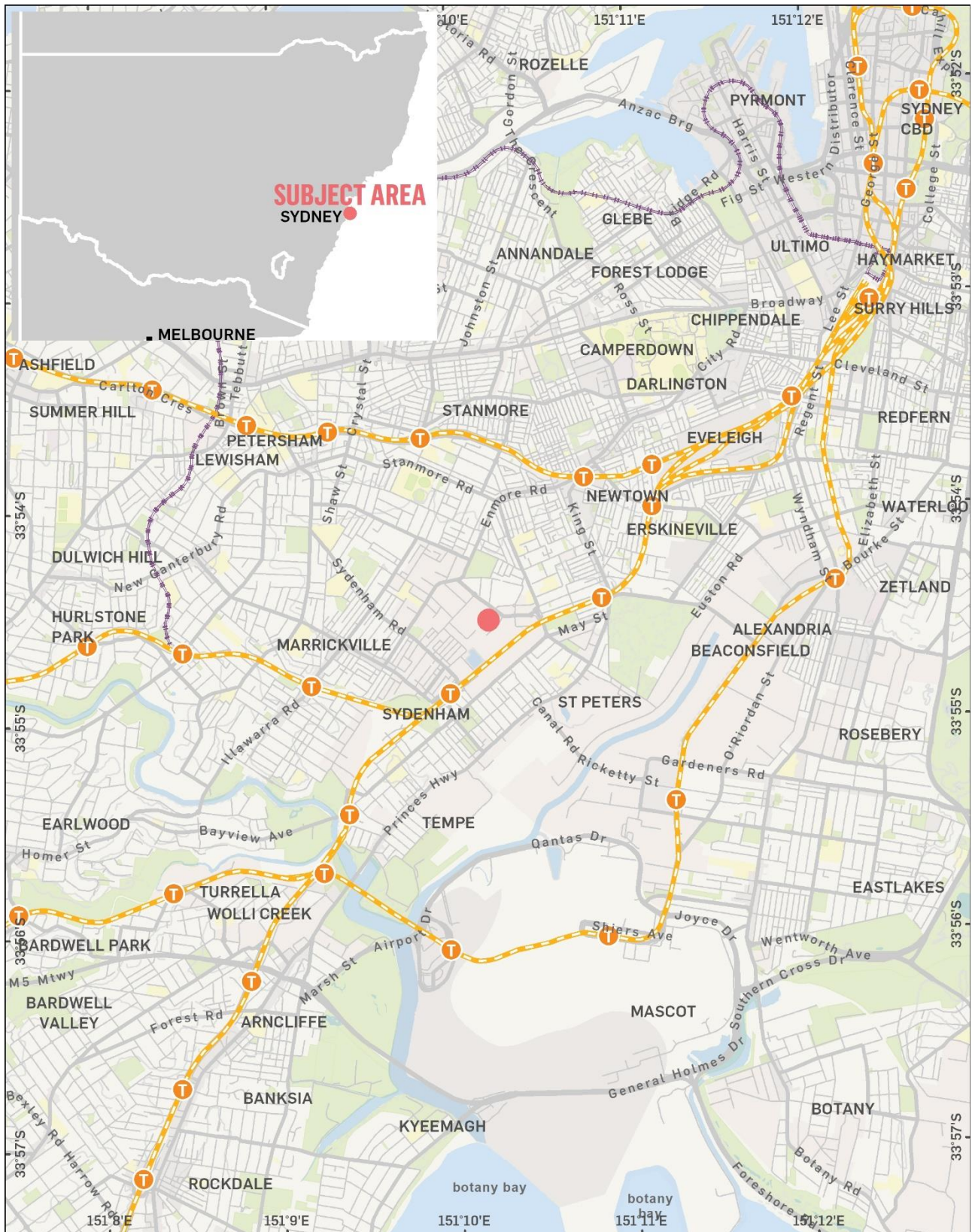


Figure 2 - The Site: Location of proposed warehouse and Customer Fulfillment Centre

Source: Nettleton Tribe





GDA 1994 MGA Zone 56



Project No: P0026069

Project Manager: Andrew Crisp

Subject Area

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**REGIONAL LOCATION**  
74 Edinburgh Road, Marrickville  
Woolworths Group Limited

Figure 3 – Regional Location





GDA 1994 MGA Zone 56

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40 M

Project No: P0026069

Project Manager: Andrew Crisp

Subject Area
 
 Contours
 

 Hydrology
 

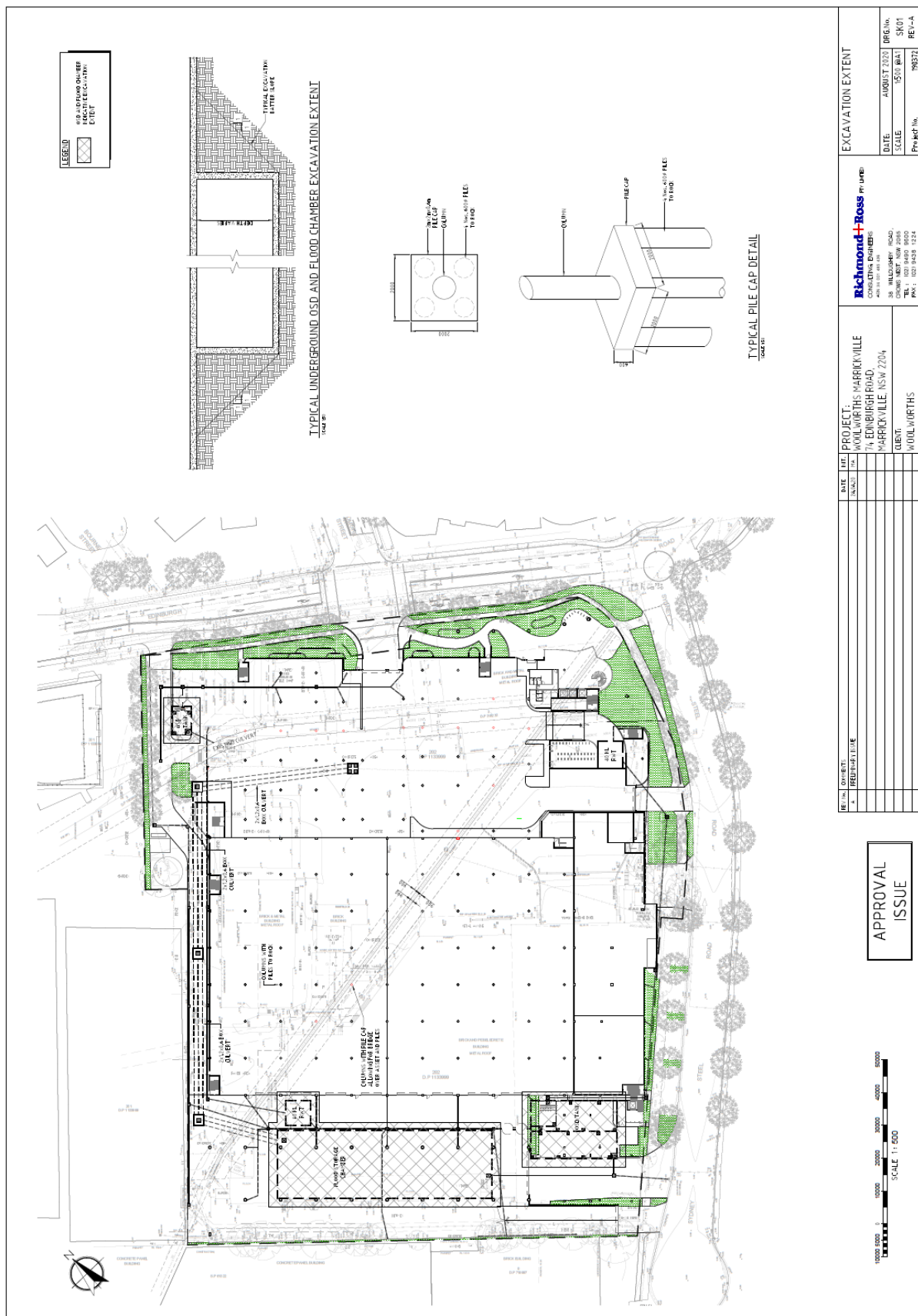
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## SUBJECT AREA

74 Edinburgh Road, Marrickville  
Woolworths Group Limited

Figure 4 – Location of the Subject Area





## 1.5. STATUTORY CONTROLS

Management of Aboriginal objects is under the statutory control of the *National Parks and Wildlife Act 1974* (NPW Act) further regulation of the process is outlined in the *National Parks and Wildlife Regulations 2009* (NPW Reg). This Aboriginal Cultural Heritage Assessment (ACHA) has been carried out in accordance with Part 6 of the NPW Act and Part 8A of the NPW Reg. The Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared the statutory guidelines under the NPW Act including:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010).
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013* (Burra Charter).

The ACHA is to accompany the State Significant Development Application (SSDA) for a new warehouse facility and associated infrastructure within the subject area. The ACHA is to be carried out in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

### 1.5.1. Marrickville Local Environment Plan 2011

As legislated by the Environmental Planning and Assessment Act 1979 (EP & A Act), each Local Government Area (LGA) is legally obliged to produce a Local Environment Plan (LEP). Within each LEP, Schedule 5 provides relevant information on locally listed heritage items, identifying items and areas of local heritage significance, and outlining consent requirements.

The subject area falls within the Inner West LGA and is subject to the Marrickville LEP 2011. Under the Marrickville LEP 2011 (Clause 5.10(2)) development consent is required for:

- (i) Demolishing or moving or altering the exterior of a heritage item, an Aboriginal object, or a building, work, relic or tree within a heritage conservation area.
- (ii) Altering a heritage item or a building, work, relic or place within a heritage conservation area, including (in the case of a building) making changes to the detail, fabric, finish or appearance of its exterior.
- (iii) Altering a heritage item that is a building by making structural changes to its interior.
- (iv) Disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.
- (v) Disturbing or excavating a heritage conservation area that is a place of Aboriginal heritage significance.
- (vi) Erecting a building on land on which a heritage item is located or that is within a heritage conservation area, or
- (vii) Subdividing land on which a heritage item is located or that is within a heritage conservation area.

A search of the Marrickville LEP Schedule 5 was undertaken on 13 August 2020. This search did not identify any heritage or archaeological items within the curtilage of the subject area. The following heritage items were identified in proximity to the subject area (within an approximate 500m radius) (Figure 7):

- Item 74: 'Enmore Box and Case Factory, including interiors' at Empire Lane (southern corner of Shelley Lane), Marrickville.
- Item 81: 'Flood storage reserve and brick drain (Sydenham Pit and Drainage Pumping Station 1)' at Garden Street, Marrickville (also listed on the NSW State Heritage Register as SHR 01644).
- Item 98: 'Brick paving' at sections of Juliett Street, Llewellyn Street, Enmore Road, Victoria Road, Bourne Street, Lynch Avenue and Murray Street, Marrickville.

- Item 124: 'Mill House, including interiors' at 34 Victoria Road (part), Marrickville.
- Item 125: 'Stead House (circa 1850s, also known as Frankfort Villa and Waterloo Villa), including interiors' at 12 Leicester Street, Marrickville.
- Item 147: 'St Pius Church, Church Hall and Presbytery, including interiors' at 290 Edgeware Road, Newtown.
- Item 160: 'Terrace housing, including interiors' at 2–24 Laura Street, Newtown.
- Item 175: 'Group of Victorian italianate and Federation period transitional style terraces, including interiors' at 29–37 Trade Street, Newtown.
- Item 178: 'Federation period shop including original shopfront and original interior detailing, including interiors' at 110 Audley Street, Petersham.
- Item 280: 'Waugh & Josephson industrial buildings former — Inter-war Functionalist Showroom and offices and workshop, including interiors' at 1–7 Unwins Bridge Road, St Peters.
- Item 281: 'Town and Country Hotel, including interiors' at 2 Unwins Bridge Road (corner Campbell Road), St Peters.
- Item 282: 'Group of Victorian filigree and Victorian italianate terrace houses — "Narara", including interiors' at 4–18 Unwins Bridge Road, St Peters.
- Item 336: 'Electricity substation No 42 (whole site)' at Fitzroy Street, Marrickville.

The nearest of the above heritage items to the subject area are Item 336, approximately 170m to the north west of the subject area, and Item 81, approximately 175m to the south-west of the subject area.

### 1.5.1. Marrickville Development Control Plan 2011

As legislated by the EP & A Act, each LGA is legally obliged to produce a Development Control Plan (DCP). Not all LGAs provide information regarding Aboriginal cultural heritage and specific development controls to protect Aboriginal cultural heritage.

The subject area is encompassed by the Marrickville DCP 2011. Part 8 of the Marrickville DCP addresses heritage items, Heritage Conservation Areas (HCAs) (Figure 6), archaeological sites, Aboriginal heritage and identifies controls to minimise negative impacts of development on such heritage items.

Controls relating to Aboriginal cultural heritage from the Marrickville DCP 2011 are outlined in Table 2 below.

The present subject area is not located within a Heritage Conservation Area. The subject area falls within the Sydney Steel Precinct (Precinct 43) of the Marrickville DCP 2011.

Table 2 – Marrickville DCP 2011 Aboriginal cultural heritage controls

Section	Text	Response
Part 8.1.11 - Places of Aboriginal heritage significance	C23 - Known and potential Aboriginal places and objects must be preserved and protected when development occurs.	This report is prepared to identify any known or potential Aboriginal places and objects within or near the subject area.
Part 8.1.11 - Places of Aboriginal heritage significance	C24 - No excavation of ground surfaces can occur in areas surrounding a known or potential Aboriginal site.	This report is prepared to identify any known or potential Aboriginal sites within or near the subject area.
Part 8.1.11 - Places of Aboriginal heritage significance	C25 - Building or landscaping works, paths and driveways must be located away from Aboriginal sites to allow for in-situ preservation of artefacts	This report is prepared to identify any known or potential Aboriginal sites within or near the subject area.

## 1.6. OBJECTIVES

The objectives of this Aboriginal Cultural Heritage Assessment Report (ACHAR) are to:

- Investigate the presence, or absence, of Aboriginal objects and/or places within and in close proximity to the subject area, and whether those objects and/or places would be impacted by the proposed development.
- Investigate the presence, or absence, of any landscape features that may have the potential to contain Aboriginal objects and/or sites and whether those objects and/or sites would be impacted by the proposed development.
- Document the nature, extent and significance of any Aboriginal objects and/or place and sites that may be located within the subject area.
- Document consultation with the Registered Aboriginal Parties (RAPs) with the aim to identify any spiritual, traditional, historical or contemporary associations or attachments to the subject area and any Aboriginal objects and/or places that might be identified within the subject area.
- Provide management strategies for any identified Aboriginal objects and/or places or cultural heritage values.
- Provide recommendations for the implementation of the identified management strategies.
- Prepare a final ACHAR to accompany SSD – 10468.

## 1.7. AUTHORSHIP

This ACHAR has been prepared by Aaron Olsen, Urbis Assistant Archaeologist, and Andrew Crisp, Urbis Senior Archaeologist, with review and quality control undertaken by Balazs Hansel, Urbis Associate Director Archaeology.

Aaron Olsen holds a Bachelor of Science (Honours – First Class in Chemistry) and PhD (Chemistry) from the University of Newcastle and a Master of Industrial Property from the University of Technology Sydney and is currently completing a Diploma of Arts (Archaeology) at the University of Sydney.

Andrew Crisp holds a Bachelor of Arts (Honours – First Class in Archaeology) from the University of Sydney.

Balazs Hansel holds a Masters (History) from the University of Szeged in addition to Masters (Archaeology and Museum Studies) from the University of Szeged, and currently undertaking PhD at the Archaeological Department at the University of Sydney.



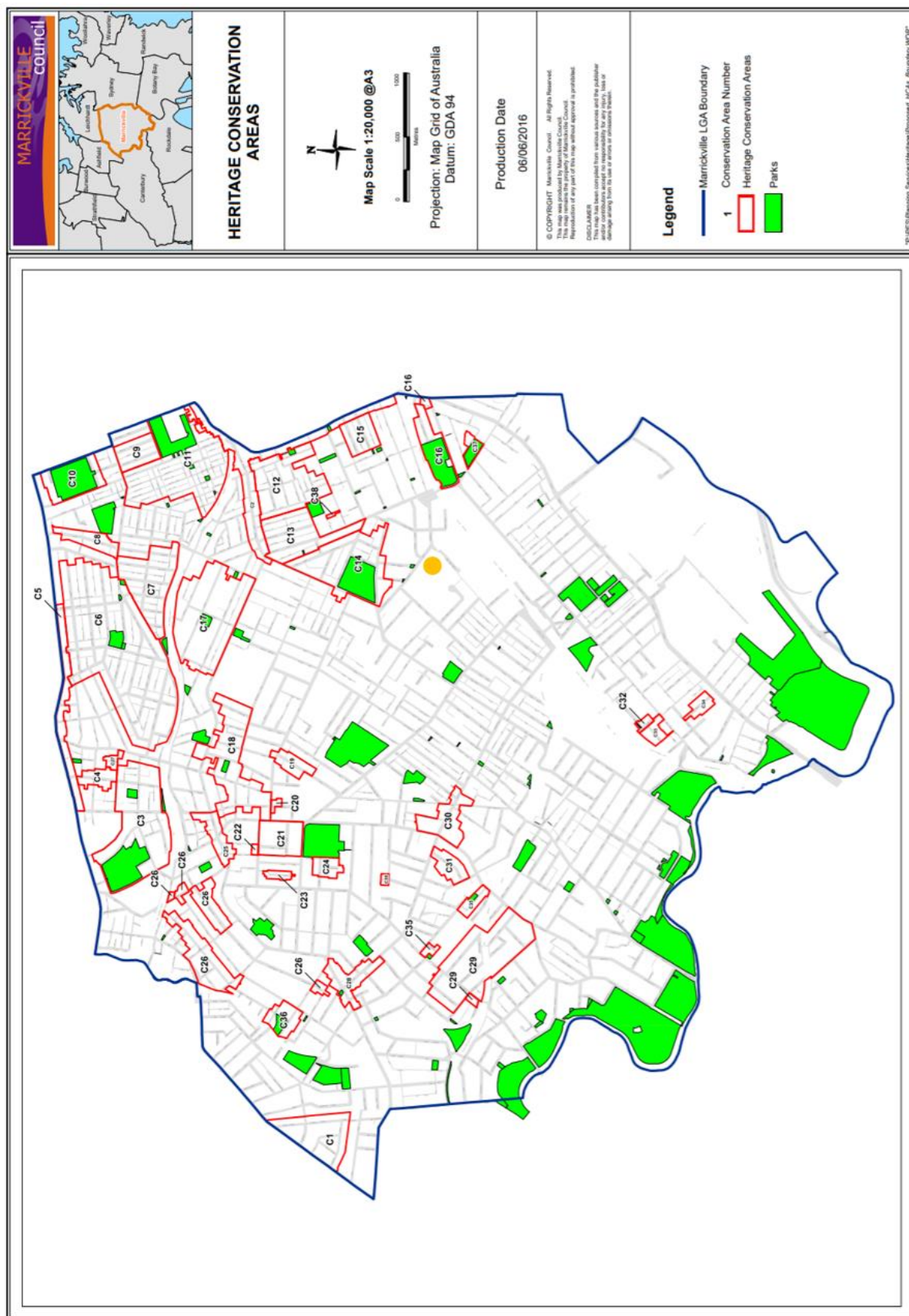
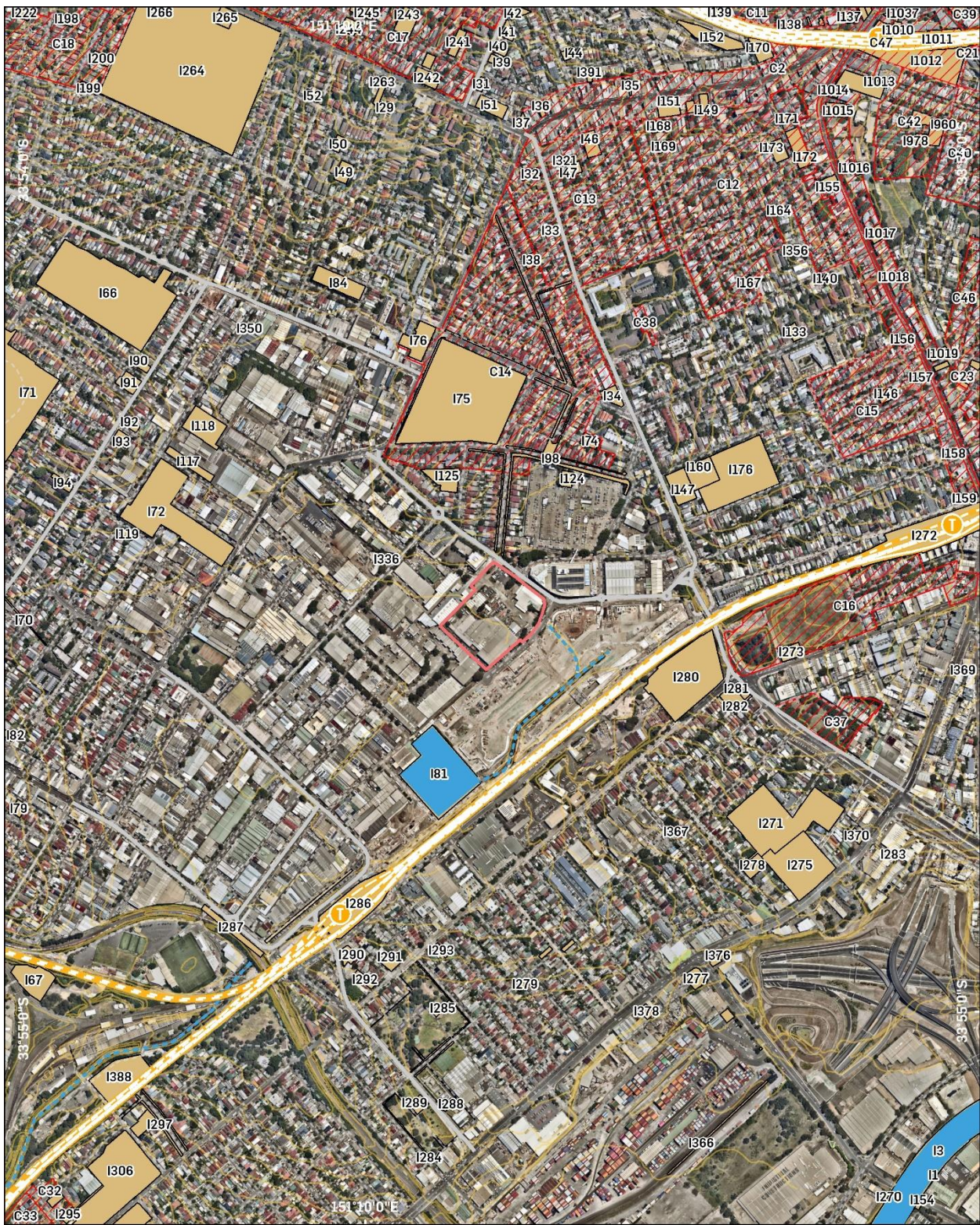


Figure 6 – Heritage Conservation Areas (red polygons) encompassed by Marrickville DCP 2011 with approximate location of subject area indicated (yellow point).  
Source: Marrickville DCP 2011





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Project No: P0026069

Project Manager: Andrew Crisp

■ Subject Area 
 ■ Hydrology 
 ■ Conservation Area - General 
 ■ Item - General 
 — Contours

**Heritage Items**  
 74 Edinburgh Road, Marrickville  
 Woolworths Group Limited

Figure 7 – Historical Heritage Items in the vicinity of the Subject Area.



## 2. ARCHAEOLOGICAL CONTEXT

### 2.1. ABORIGINAL ARCHAEOLOGICAL BACKGROUND

This section comprises the summary of the archaeological background research for Aboriginal cultural heritage resources. This includes the search of the Aboriginal Heritage Information Management System (AHIMS), previous archaeological investigations pertinent to the subject area and landscape analysis.

#### 2.1.1. Aboriginal Heritage Information Management System

The AHIMS database comprises previously registered Aboriginal archaeological objects and cultural heritage places in NSW and it is managed by the Department of Premier and Cabinet (DPC) under Section 90Q of the *National Parks and Wildlife Act 1974* (NPW Act). Aboriginal objects are the official terminology in AHIMS for Aboriginal archaeological sites. Henceforth, we will use the term of 'Aboriginal site(s)', 'AHIMS site(s)', 'archaeological site(s)' or 'sites' to refer and to describe the nature and spatial distribution of archaeological resources in relation to the subject area.

An extensive search of the AHIMS database was carried out on the 11<sup>th</sup> August 2020 (AHIMS Client Service ID: 526644) for an area of approximately 10 km<sup>2</sup>. The basic and extensive AHIMS search results are included in Appendix A. A summary of all previously registered Aboriginal sites within the extensive search area is provided in Table 3 and Figure 8 and the spatial distribution of the sites is shown in Figure 9 and Figure 10.

The AHIMS search identified no Aboriginal sites or Aboriginal places within the subject area.

The nearest registered Aboriginal site to the subject area is AHIMS ID# 45-6-2654 (Figure 9). AHIMS ID# 45-6-2654 is located in Fraser Park, approximately 900m south-west of the subject area. Fraser Park is located adjacent to the same tributary of the Cooks River as the present subject area. There is no available site card for AHIMS ID# 45-6-2654, but it is identified as a Potential Archaeological Deposit (PAD) in the AHIMS search results. A Permit to Carry Out Preliminary Research was issued for the site under s. 87(1) NPW Act 1974 (Permit #1639) to conduct small test excavations. Those excavations are described in McIntyre-Tamwoy (2003), which identifies the site as a shell deposit and potential midden. The excavation report concluded that the shell deposit was naturally accumulated and therefore not a midden. The report recommends that the shell deposit be recorded in AHIMS as 'not a site'.

In the broader Extensive AHIMS search area a total of 70 Aboriginal sites are registered. In addition to AHIMS ID# 45-6-2654, four additional search results were subsequently identified as 'not a site' and two were identified as a 'duplicate'. These have been excluded from the analysis, reducing the number of sites in the extensive search area to 63 (see Table 3 and Figure 8).

Identified sites in the Extensive search area include both open context and closed context sites, consistent with the varied landforms across the search area. The most common site types identified in the search are PADs, which represent 33% (n=21) of search results, and artefact scatters, which represent 14% (n=9) of search results. The high proportion of PADs is consistent with an urban environment, in which early development occurred on top of areas that may have been previously utilised by Aboriginal people. The relatively low to moderate ground disturbance associated with such early development may have acted to preserve underlying archaeological deposits. The densities of the artefact scatters vary from small scatters of as few as two objects to large scatters of hundreds of objects. Spatially, objects within the search area tend to be located primarily within proximity of waterways, especially Wolli Creek and the Cooks River, which are the major waterways in the area.

These results reinforce the generic predictive model for the Cumberland Plain, which suggests that Aboriginal objects are anticipated to occur in higher frequency and density within 200m of high order streams. Artefact scatters are also anticipated within 200m of lower order streams, but these are generally low density, background scatters and generally reflective of less prolonged, transitional use of the landscape.

It should be noted that the AHIMS register does not represent a comprehensive list of all Aboriginal objects or sites in a specified area as it lists recorded sites only identified during previous archaeological survey effort. The wider surroundings of the subject area and in general the Cumberland Plain area have been the subject of various levels and intensity of archaeological investigations during the last few decades. Most of the registered sites have been identified through targeted, pre-development surveys for infrastructure and maintenance works, with the restrictions on extent and scope of those developments.

Table 3 – AHIMS search results (Client Service ID: 526644)

Site Type	Context	Total	Percentage
PAD	Open	21	32%
Artefact Scatter	Open	9	13%
Shelter	Closed	7	10%
Midden	Open	6	9%
Shelter with Midden	Closed	5	8%
Isolated Find	Open	3	5%
Aboriginal Gathering	Open	2	3%
Artefact Scatter with Non-human Organic Material	Open	1	2%
Contact Site with Artefact Scatter	Open	1	2%
Grinding Groove	Open	1	2%
Midden with Artefact Scatter	Open	1	2%
Modified Tree	Open	1	2%
Shelter with Art	Closed	1	2%
Shelter with Art, Artefact Scatter and Midden	Closed	1	2%
Shelter with Burial and Midden	Closed	1	2%
Shelter with PAD	Closed	1	2%
Water Hole	Open	1	2%
<b>Total</b>		<b>63</b>	<b>100%</b>

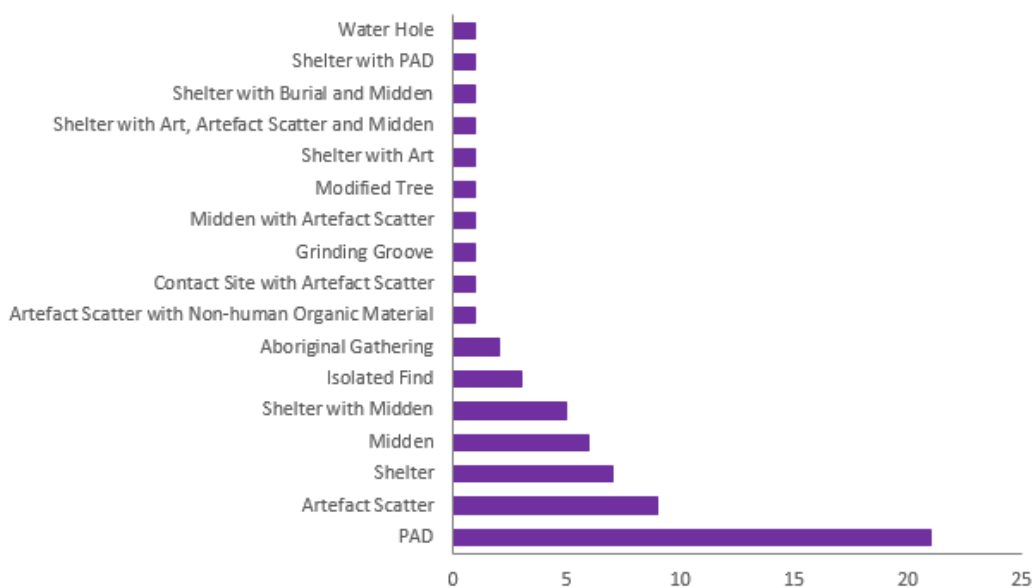
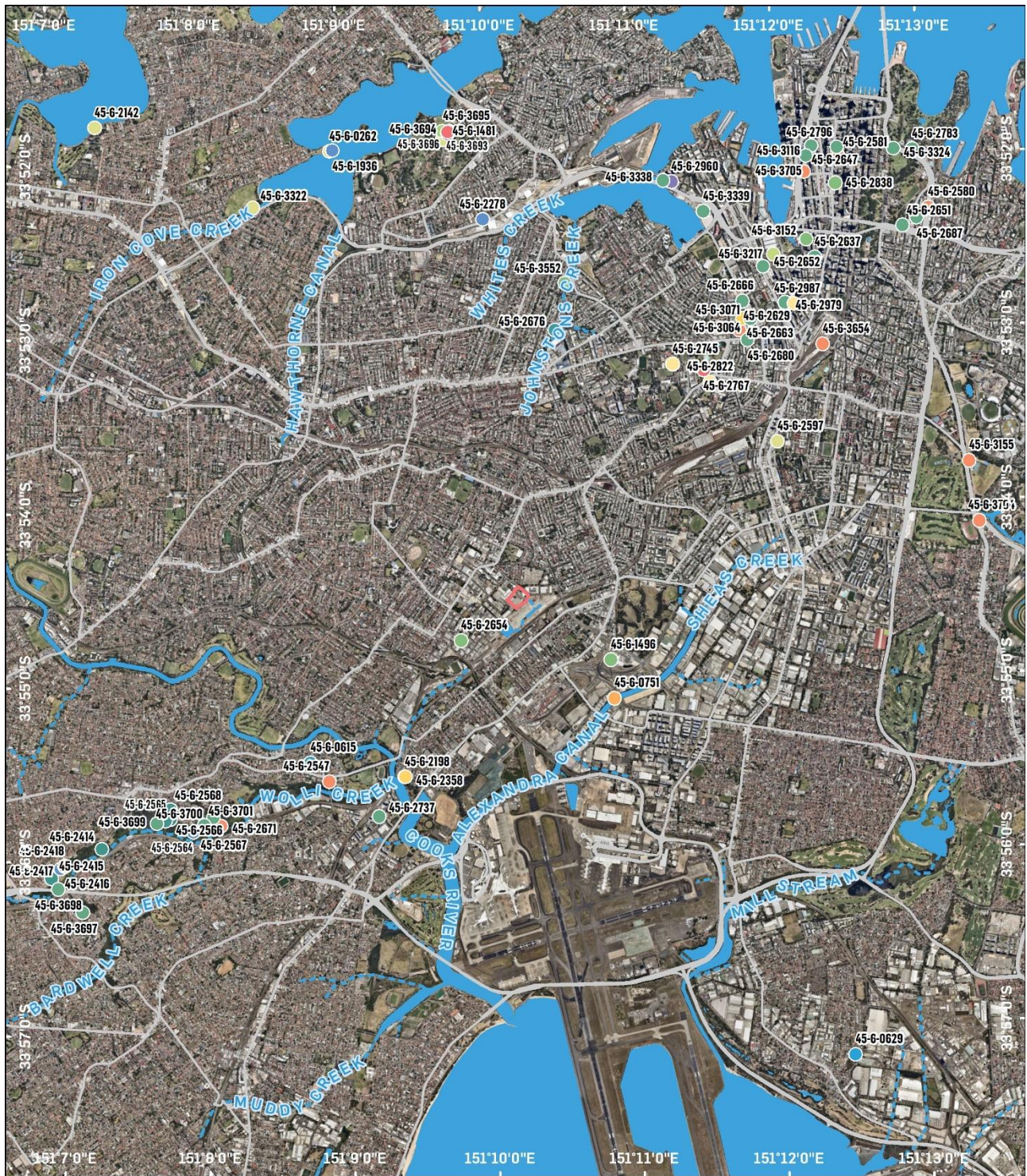


Figure 8 – Graph showing the results of AHIMS Search for Client Service ID: 526644





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Project No: P0026069

Project Manager: Andrew Crisp

Subject Area Aboriginal Gathering

Permanent

Ephemeral

Hydrology

Duplicate

Grinding Groove

Isolated Find

Midden

Midden with Artefact Scatter

Modified Tree

Not a Site

PAD

Shelter

Shelter with Art

Shelter with Art, Artefact Scatter and Midden

Shelter with Burial and Midden

Shelter with Midden

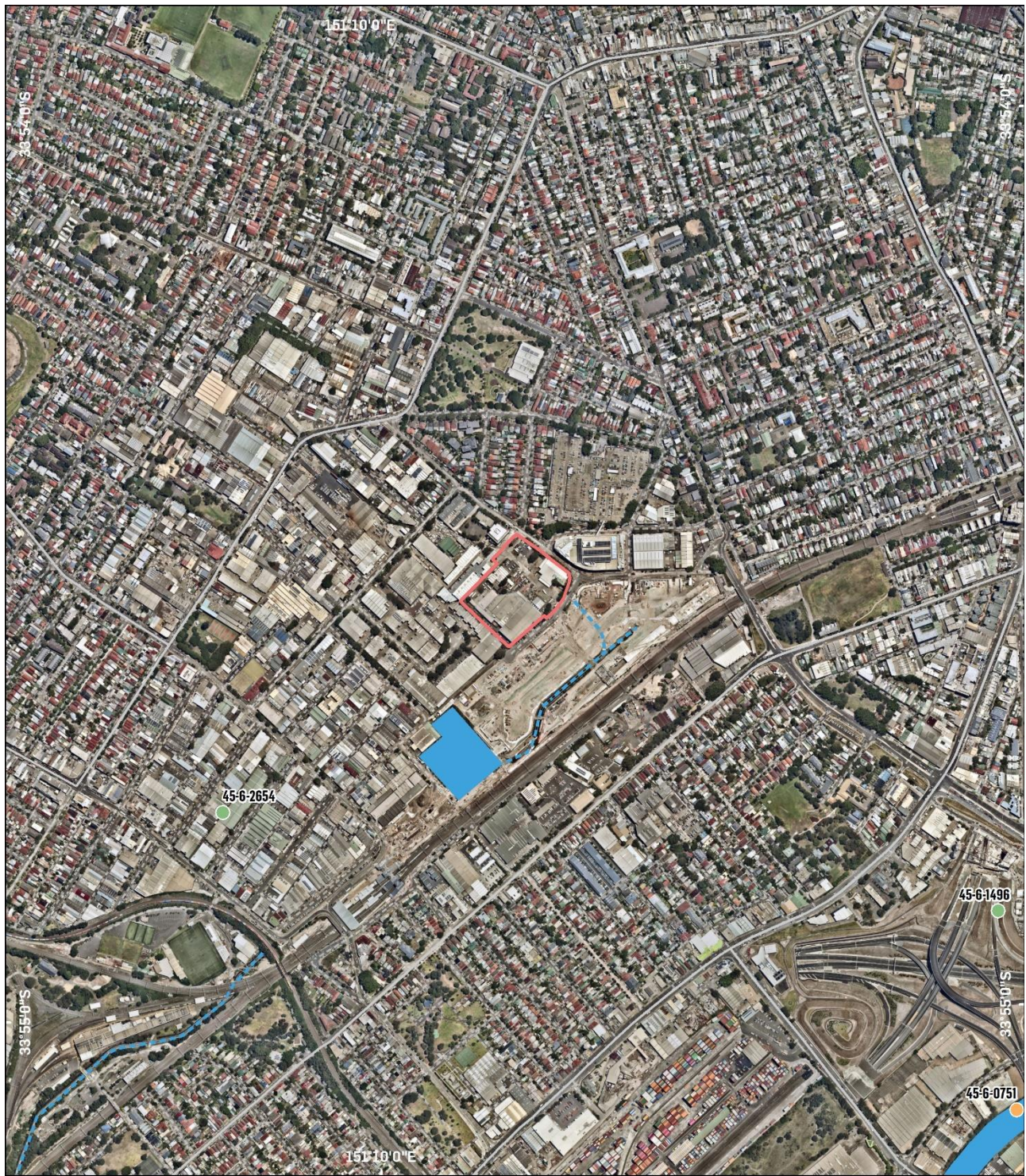
Shelter with PAD

Water Hole

**REGISTERED AHIMS SITES**  
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Figure 9 – Registered AHIMS sites





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Project No: P0026069

Project Manager: Andrew Crisp

- Subject Area
- Permanent
- - - Ephemeral
- Hydrology
- Artefact Scatter with Non-human Organic Material
- Not a Site

**REGISTERED AHIMS SITES**  
74 Edinburgh Road, Marrickville  
Woolworths Group Limited

Figure 10 – Registered AHIMS sites



## 2.1.2. Regional Archaeological Context

Previous archaeological assessments across the Cumberland Plain provide important data on Aboriginal archaeological site distribution and typology. From this an understanding of the archaeological landscape within the subject area can be developed.

Aboriginal life in the Sydney region encompasses at least 20,000 years, with dates of 13,000 before present (BP) at Shaws Creek in the Blue Mountain foothills, 11,000 BP at Mangrove Creek and Loggers Shelter and c. 20,000 BP at Burrill Lake on the NSW South Coast (Attenbrow 2010). Most sites in the Sydney region have been dated to within the last 3,000 to 5,000 years. Many researchers propose that the apparent intensification of occupation during this period may have been influenced by rising sea levels at the end of the Pleistocene epoch (the last 'ice age'), with sea levels reaching current levels by about 6,500 BP. Radiocarbon dating of charcoal samples from sand sheet contexts in proximity to the Cooks River have indicated occupation to the late Pleistocene (JMCHM 2005b). Older occupation sites along the now submerged coastline would have been flooded, with subsequent occupation concentrating and utilising resources along the current coastlines and changing ecological systems in the hinterland and the Cumberland Plain (Attenbrow 2010).

The existing archaeological record is limited to certain materials and objects that were able to withstand degradation and decay. As a result, the most common type of Aboriginal objects remaining in the archaeological record are stone artefacts. Archaeological analyses of these artefacts in their contexts have provided the basis for the interpretation of change in material culture over time. Technologies used for making tools changed, along with preference of raw material. Different types of tools appeared at certain times, for example ground stone hatchets are first observed in the archaeological record around 4,000 BP in the Sydney region (Attenbrow 2010:102). It is argued that these changes in material culture were an indication of changes in social organisation and behaviour.

After 8,500 BP silcrete was more dominant as a raw material and bifacial flaking became the most common technique for tool manufacture. From about 4,000 BP to 1,000 BP backed artefacts appear more frequently. Tool manufacture techniques become more varied and bipolar flaking increases (JMCHM 2006). It has been argued that from 1,400 to 1,000 years before contact there is evidence of a decline in tool manufacture. This reduction may be the result of decreased tool making, an increase in the use of organic materials, changes in the way tools were made, or changes in what types of tools were preferred (Attenbrow 2010). The reduction in evidence coincides with the reduction in frequency of backed blades as a percentage of the assemblage.

The archaeological evidence indicates that Aboriginal people were occupying the region around the subject area well before the arrival of the First Fleet in 1788. In the 1890s, dugong bones were discovered at Shea Creek during the construction of the Alexandra Canal, St Peters, approximately 1.4km south-west of the present subject area. The bones exhibited transverse and oblique cuts, which have been attributed to butchering by Aboriginal people (Etheridge et al. 1896). The dugong bones have been dated to around 5520±70 BP (Haworth et al. 2004). A shell midden was also found nearby at the St Peters Brickworks Quarry site, in close proximity to the site of the dugong bone finding, suggesting the area was frequented by Aboriginal people for obtaining food (Moran & Conyers 1983).

After European colonisation, Aboriginal people of the Sydney region continued to manufacture tools, sometimes with new materials such as bottle glass, flint from ship ballast or ceramics. Flaked glass has been recorded at a number of sites across the Sydney region, for example, Prospect (Ngara Consulting 2003) and Ultimo (AHIMS ID# 45-6-2663). Evidence of Aboriginal occupation and resource use continues to exist in some urban sites that contain remnant portions of the original soil profile.

Based on the above background, it is possible that similar evidence of Aboriginal occupation will also be present within original and/or intact topsoils throughout the Sydney urban area, including the region surrounding the present subject area.

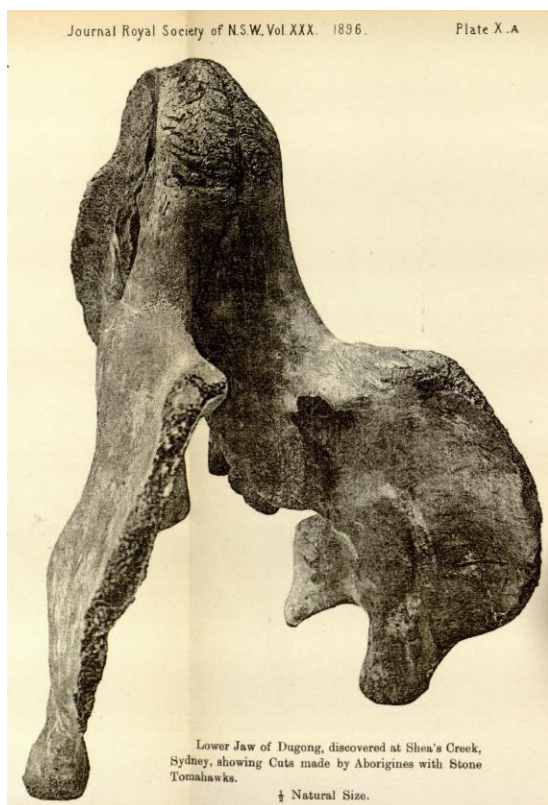


Figure 11 – Lower jaw of Dugong with cut marks, discovered at Shea's Creek, St Peters.  
Source: Etheridge et al., 1896.

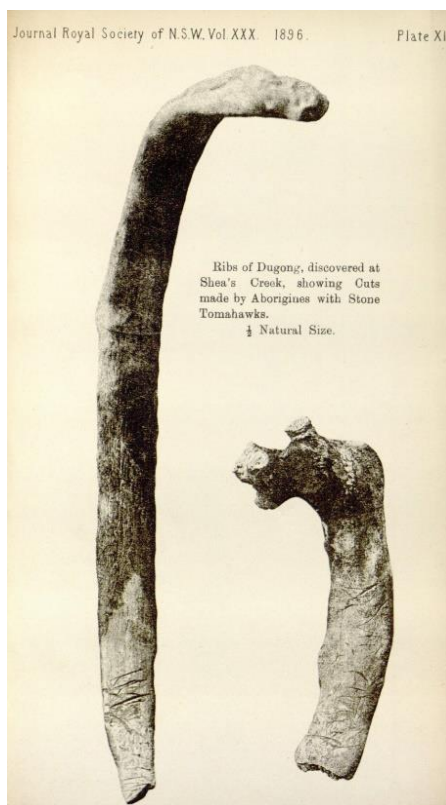


Figure 12 – Ribs of Dugong with cut marks, discovered at Shea's Creek, St Peters.  
Source: Etheridge et al., 1896.

### 2.1.3. Local Archaeological Context

Previous archaeological investigations have provided invaluable information on the spatial distribution, nature and extent of archaeological resources in a given area. While there were no readily available previous assessments of the subject area itself, there have been several previous studies of a Sydney Metro City & Southwest site located on the southern side of Sydney Steel Road. These studies are summarised in detail below. There have also been numerous archaeological investigations carried out in the surrounding area during the last 30 years. A number of these reports have been sourced from the AHIMS register. A summary of findings of the most pertinent to the subject area is provided in Table 4.

#### **Artefact, May 2016. Sydney Metro Chatswood to Sydenham, Aboriginal Heritage – Archaeological Assessment.**

As part of the Sydney Metro City & Southwest Chatswood to Sydenham project (SSI 7400), an Aboriginal archaeological assessment of the proposed dive site at Marrickville was undertaken by Artefact in May 2016. The Marrickville dive site is located adjacent of the present subject area, on the southern side of Sydney Steel Road (Figure 13).

The report notes that the site is likely to have been originally located on the margin of a low-lying drainage channel, which was canalised during industrial and commercial development of the area (Figure 14 and Figure 15). Given the discovery of butchered dugong bones in nearby Shea Creek during the construction of Alexandra Canal in the 1890s (Etheridge et al. 1896), the area may have been a tidally influenced estuary utilised by Aboriginal people for resources.

Geotechnical information from boreholes placed in the nearby Murray Street road easement and the Edgeware Road easement indicate a soil profile consisting of between 0.7–1.3 m of fill overlying a 0.6 m of thick silty clay alluvium layer, which overlies residual sediments to a depth of 7.5 m. Despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments indicates that there is likely to be some remaining archaeological potential at the site. The report concludes that there is moderate-high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.

The report recommended further archaeological investigation of the site, potentially including archaeological test and salvage excavation, where surviving natural soils are identified.





Figure 13 – Location of the Proposed Marrickville dive site for the Sydney Metro City & Southwest with the present subject area indicated by yellow polygon  
Source: Artefact, May 2016.



Figure 14 – View south-west of Murray Street showing canal  
Source: Artefact, May 2016.



Figure 15 – View south across Sydenham Drainage Pit and Pumping Station  
Source: Artefact, May 2016.

## Artefact, October 2016. Sydney Metro Chatswood to Sydenham, Aboriginal Cultural Heritage Assessment.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) was produced for the Sydney Metro City & Southwest Chatswood to Sydenham project (SSI 7400), subsequent to the Aboriginal Archaeological Assessment (Artefact, May 2016). The ACHAR encompassed the Marrickville dive site, located adjacent of the present subject area on the southern side of Sydney Steel Road (Figure 13).

The ACHAR reiterated the finding that the site had moderate to high archaeological potential, based on the presence of natural sediments below built structures. Archaeological test excavation was recommended as a harm mitigation measure where intact soil profiles are encountered with the potential to contain archaeological deposits.

Table 4 – Summary of previous Aboriginal archaeological assessments

Report	Summary	Analysis	Key learnings
Artefact, 2017. Sydney Metro City & Sydenham to Bankstown Upgrade, Technical Paper 4, Aboriginal Heritage Impact Assessment.	<p>Aboriginal Heritage Impact Assessment for the Sydney Metro City &amp; Sydenham to Bankstown Upgrade, which runs from Marrickville Station to Bankstown Station.</p> <p>The study area includes Marrickville Station, approximately 1.5 km south-west of the present subject area and approximately 1 km from the nearest waterway (the Cooks River). The Marrickville Station site was assessed to have been largely disturbed by construction of Marrickville Station, the existing commuter and goods railway lines and surrounding residential and commercial buildings. The archaeological potential of the Marrickville Station site was assessed to be nil to low due to its distance from the nearest water and extensive historical ground disturbance that would have impacted any surface or subsurface Aboriginal sites.</p>	<ul style="list-style-type: none"> <li>Proximity to waterways is correlated with archaeological potential.</li> <li>Historical ground disturbance may significantly reduce the archaeological potential of a site.</li> </ul>	<ul style="list-style-type: none"> <li>The location of the subject area at the confluence of two waterways indicates a high archaeological potential, although this may be reduced by historical ground disturbance.</li> </ul>
GML, 2015. Stages 11, 12 and 13, Discovery Point, Aboriginal Heritage Due Diligence Report.	<p>Aboriginal Heritage Due Diligence Report for the Discovery Point Development Precinct, approximately 2.5 km south-west of the present subject area.</p> <p>Geotechnical coring indicated that the subject area consisted of historical fill overlaying waterlogged estuarine mud, which was unlikely to have been inhabited by Aboriginal people. Additionally, it was determined to be unlikely that any original land surface or archaeological deposit remains intact above the water table, due to historical land disturbance. The assessment found that it was unlikely that any Aboriginal objects would be found in the study area.</p>	<ul style="list-style-type: none"> <li>Aboriginal objects may be preserved below historical fill in soil landscapes likely to have been frequented by Aboriginal people.</li> <li>Historical ground disturbance may reduce the archaeological potential of a site.</li> </ul>	<ul style="list-style-type: none"> <li>Historical fill in the subject area may preserve archaeological deposits in underlying intact natural soils.</li> </ul>

<p>GML, 2014. 200 George Street, Sydney Aboriginal Archaeological Excavation.</p>	<p>Report for Aboriginal test excavation undertaken on an area of identified PAD at 200 George Street.</p> <p>The assessment was triggered by the identification of natural soils during historical archaeological investigations. No Aboriginal objects or sites were identified during test excavation. This is attributed to the pre-colonisation landscape and environmental conditions being unsuitable for Aboriginal occupation in this area.</p>	<ul style="list-style-type: none"> <li>• Intact natural soil may remain even in urban, highly developed areas.</li> <li>• While the presence of natural soils does not necessarily indicate the presence of Aboriginal objects, it does identify a need for further investigation.</li> <li>• Landscape and environmental factors play a significant role in determinations of archaeological potential.</li> </ul>	<ul style="list-style-type: none"> <li>• Intact natural soil may remain within the subject area.</li> </ul>
<p>Biosis, 2012. The Quay Project, Haymarket: Aboriginal Cultural Heritage Assessment Final Report</p>	<p>Aboriginal Cultural Heritage Assessment resulting from the identification of intact natural soil during historical archaeological salvage excavations.</p> <p>Biosis concluded that significant and extensive modification of the landscape since the late 18<sup>th</sup> Century would likely have removed all traces of Aboriginal occupation through the removal of the soil profile. During historic excavations, remnant deposits of natural soil were encountered triggering the need for further Aboriginal archaeological assessment. No artefacts were identified within the remnant soils during test excavation.</p> <p>During historical salvage excavation of a European post hole, a single lithic artefact was identified. This was clearly in a disturbed context and did not change the conclusion that the archaeological potential of the site was considered to be low with the artefact determined to be of low significance.</p>	<ul style="list-style-type: none"> <li>• Intact natural soil may remain even in urban, highly developed areas.</li> <li>• While Aboriginal objects may occur in areas of high disturbance, this disturbance will likely impact on the associated significance.</li> <li>• While the presence of natural soils does not necessarily indicate the presence of Aboriginal objects, it does identify a need for further investigation.</li> </ul>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>

<p>Biosis, 2012. 445-473 Wattle St, Ultimo: Proposed Student Accommodation Development, Aboriginal Cultural Heritage Assessment Report.</p>	<p>Aboriginal Cultural Heritage Assessment in relation to the potential for Aboriginal objects or areas of sensitivity in Ultimo.</p> <p>Disturbance across the subject site included single-storey brick commercial buildings as well as concreting and asphaltting, all of which reduced ground surface visibility during the field survey.</p> <p>Biosis argued that, despite the development on the site, it was likely that deep portions of alluvial soils would be retained across the area beneath European fill and that these soils, at a depth of approximately 7m, would have moderate-high archaeological potential due to the other landscape features present (namely the proximity of Blackwattle Creek).</p>	<ul style="list-style-type: none"> <li>• Highly developed urban environment.</li> <li>• Suggests artefact bearing soils may still be present at great depth despite the presence of development and imported fill.</li> </ul>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>
<p>Comber Consultants Pty Ltd, 2009. Draft Aboriginal Cultural Heritage Assessment, Sydney Metro Network Stage 2 (Central-Westmead)</p>	<p>Draft Aboriginal Cultural Heritage Assessment for Sydney Metro Network Stage 2 (Central-Westmead). The study area includes Broadway-Sydney University, approximately 3.25 km north-east of the present subject area.</p> <p>A field survey of the study area did not identify any Aboriginal objects. Previous excavations indicated that the study area had been subjected to ground disturbance, due to historical agricultural use and subsequent construction of the university buildings and landscaping. The original land surface would have been cut and filled for construction purposes, causing significant disturbance. As a result of historical ground disturbance, it was expected that no sub-surface evidence of Aboriginal occupation would remain.</p>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may not remain in areas where historical ground disturbance has impacted the subsurface.</li> </ul>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain within the subject area where historical ground disturbance is relatively superficial.</li> </ul>
<p>JMCHM, 2006. Archaeological salvage of a stormwater easement and testing within the</p>	<p>Archaeological report for salvage excavations at Tempe House, Discovery Point, approximately 2.7 km south-west of the present subject area.</p>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain in areas of historical disturbance.</li> </ul>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain in natural deposits at depth within the subject area despite</li> </ul>

State Heritage Register Conservation Precinct at the former Tempe House, Discovery Point.	Despite considerable historical ground disturbance, the excavation recovered artefacts associated with stone tool manufacture and gathering of shellfish. Shells were recovered that were likely to have been collected by Aboriginal people from the mudflats at the margins of the Cooks River. The shells were dated to between 3,570-4,940 cal BP (calibrated years before present). Stone tools were recovered that were made from stone not likely to have been sourced in the local area. The evidence suggests short term use of the subject area for sourcing food.	<ul style="list-style-type: none"> <li>Waterways in the area were used as a source of food by Aboriginal people.</li> </ul>	<p>historical ground disturbance.</p> <ul style="list-style-type: none"> <li>The location of the subject area near a waterway may be indicative of Aboriginal occupation.</li> </ul>
JMCHM, 2006. Sydney University Campus 2010, Test Excavations at The University of Sydney Central Site, Darlington Campus.	<p>Archaeological test excavations at The University of Sydney Darlington Campus, approximately 2.8 km north-east of the present subject area.</p> <p>The test excavation yielded a single flaked silicified tuff artefact from an intact B horizon below fill deposits and a buried A horizon.</p>	<ul style="list-style-type: none"> <li>Intact natural soil may remain even in urban, highly developed areas.</li> <li>While the presence of natural soils does not necessarily indicate the presence of Aboriginal objects, it does identify a need for further investigation.</li> <li>Suggests artefact bearing soils may still be present at great depth despite the presence of development and imported fill.</li> </ul>	<ul style="list-style-type: none"> <li>Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>
Dominic Steele Consulting Archaeology, 2006. Aboriginal Archaeological Excavation Report, The KENS Site.	<p>Archaeological Assessment for the KENS site (Kent, Erskine, Napoleon and Sussex Streets), involving excavation.</p> <p>These excavations were primarily focused at identifying European archaeological materials. A subsurface stone artefact assemblage was recovered during excavation despite high levels of disturbance associated with post-</p>	<ul style="list-style-type: none"> <li>Highly developed urban environment.</li> <li>Suggests that disturbance does impact potential, but that remnant natural soil in highly disturbed environments retains</li> </ul>	<ul style="list-style-type: none"> <li>Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>

	<p>settlement development including 19<sup>th</sup> century terraces, hotels, garages, and a multi-storey carpark, as well as vacant lots and a section of the Western Distributor. The lithics were identified in an area to the north east below the basement floor level in an area of remnant natural soil. The stratigraphic record of the site identified that natural soil profiles were truncated and rapidly buried in the subject site in the early days of development.</p>	archaeological potential.	
<p>JMCHM, 2005. Archaeological Testing and Salvage Excavation at Discovery Point, Site #45-6-2737 in the former grounds of Tempe House, NSW.</p>	<p>Archaeological report for salvage excavations at Tempe House, Discovery Point, approximately 2.7 km south-west of the present subject area.</p> <p>Despite high levels of historical disturbance, evidence of an intact prehistoric occupation site was discovered in the sand body adjacent to the former Tempe House. A charcoal feature associated with stone artefacts was radiocarbon dated to 10,700 cal BP. Corresponding to the late Pleistocene, this was the earliest date found for an occupation site in the eastern coastal part of the Sydney Basin at the time.</p>	<ul style="list-style-type: none"> <li>Aboriginal archaeological deposits may remain in areas of historical disturbance.</li> <li>The region around the subject area was occupied by Aboriginal people for at least 10,000 years before European arrival.</li> <li>Waterways in the area are associated with Aboriginal occupation sites.</li> </ul>	<ul style="list-style-type: none"> <li>Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> <li>The location of the subject area near a waterway may be indicative of Aboriginal occupation.</li> </ul>
<p>Dominic Steele Consulting Archaeology, 2002. Aboriginal Archaeological Assessment Report, the KENS Site</p>	<p>Aboriginal archaeological assessment report evaluating the likelihood for Aboriginal archaeological deposits to be present within the KENS site (discussed above), where heavy development had taken place post-settlement.</p> <p>The development included 19<sup>th</sup> century terraces, hotels, garages, and a multi-storey carpark, as well as vacant lots and a section of the Western Distributor. The assessment concluded that the area would likely have been utilised by Aboriginal people prior to European occupation, however, European occupation may limit the potential for intact Aboriginal materials to be located on the</p>	<ul style="list-style-type: none"> <li>Highly developed urban environment.</li> <li>Suggests that while disturbance may impact the likelihood for Aboriginal archaeological materials to survive on the surface <i>in situ</i> deposits may remain below imported fill in areas where soil has not been</li> </ul>	<ul style="list-style-type: none"> <li>Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>

	<p>surface. DSCA suggested that below imported fill associated with this occupation and development, subsurface evidence of Aboriginal utilisation of the area may occur.</p>	<p>completely removed.</p>	
<p>Dominic Steele Consulting Archaeology, 2002. Salvage Excavation Potential Aboriginal Site, 589-593 George Street, Sydney.</p>	<p>Salvage excavation report for a potential midden site, AHIMS ID# 45-6-2637. This site was identified during historic archaeological excavations for a range of 19th century terraces that documented the early European occupation of 'Brickfield Hill'.</p> <p>The potential site was described as a thin band of shell that was present below European deposits. No associated Aboriginal archaeological features were found with the shell and it was determined that the shells related to the European use of the site, with the shells representing mortar practices.</p>	<ul style="list-style-type: none"> <li>• Provides methodology for determining origin of midden sites.</li> <li>• Concluded lack of Aboriginal objects suggests non-Aboriginal origin for shell deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• It is considered unlikely that middens will occur within the subject area on the basis of the landscape features present.</li> </ul>
<p>Godden Mackay Heritage Consultants, 1997. Angel Place Final Excavation Report.</p>	<p>Salvage excavation report for the excavation of AHIMS ID#45-5-2581, an open camp site identified adjacent to the central Sydney Tank Stream. This was undertaken through a consent to destroy permit. The salvage excavation identified fifty-four flaked stone artefacts within the area. GML identified that the site was the first to be located in the Tank Stream easement, however they concluded that this was due to the high amount of disturbance post-settlement in this area of Sydney and, further, that the distribution of artefacts recovered suggests a contiguous distribution of lithics on the banks of the tank stream, from continuous or repetitive periods of occupation.</p>	<ul style="list-style-type: none"> <li>• Disturbed urban environment located in close proximity to a major water source.</li> <li>• Results suggesting that disturbance may not necessarily entirely remove the potential for Aboriginal objects to be recovered from what would have been originally a high potential landform but may impact density.</li> </ul>	<ul style="list-style-type: none"> <li>• Aboriginal archaeological deposits may remain within the subject area despite historical ground disturbance.</li> </ul>

## 2.1.4. Summary of Previous Archaeological Investigations

The conclusions drawn from the archaeological background information, including AHIMS results and previous pertinent archaeological investigations are the following:

- There are no registered Aboriginal sites located within, or in proximity to, the subject area.
- The nearest registered Aboriginal site to the subject area is AHIMS ID# 45-6-2654, which is located approximately 900m to the south-west adjacent to the same ephemeral waterway as the subject area. It is recorded as a Potential Archaeological Deposit (PAD), although a later publication indicates it is not a site but rather a natural accumulation of shell.
- While the location of previously identified archaeological sites may indicate a likelihood of identification of further archaeological sites in the same area, an absence of sites is not a reliable indicator of low archaeological potential as this may merely reflect a low number of archaeological investigations.
- Archaeological sites can be found on a variety of landscape features throughout the Sydney Basin, with higher frequency in the vicinity of waterways.
- Level of ground disturbance is likely to correlate with the potential for Aboriginal objects and/or sites to be identified, with higher disturbance generally lowering archaeological potential. However, intact archaeological deposits may be found in remnant natural soils beneath historic fill deposits or where the natural soil profile is deep.
- The potential for sub-surface archaeological deposits may exist where there is no visible surface evidence and in areas of ground disturbance.
- Previous archaeological investigations in the vicinity of the subject area confirms that despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments in the vicinity of the subject area indicates that there is likely to be some remaining moderate to high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.



## 2.2. GEOLOGY AND SOILS

The subject area is located within the Sydney Basin bioregion and entirely within the Birrong Soil Landscape (bg), although in close proximity to the Blacktown Soil Landscape (bt) (Figure 16).

The Birrong Soil Landscape is described as residing on level to gently undulating alluvial floodplain draining Wianamatta Group shales. Soils are described as deep (>250 cm) Yellow Podzolic Soils (Dy2.42, Dy3.12) and Yellow Solodic Soils (Dy3.42) on older alluvial terraces, or deep (>250 cm) Solodic Soils (Dy3.42) and Yellow Solonetz (Dy3.43) on current floodplains. Dominant soil materials include dark brown pedal silty clay loam, bleached hard setting clay loam, orange mottled silty clay, brown mottled clay, and light grey mottled saline clay.

The lower slopes of Blacktown soil landscape (bt) adjoin and occasionally overlap the Birrong soil landscape. The Blacktown Soil Landscape is described as residing upon gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Soils are described as shallow to moderately deep (<100 cm) Red and Brown Podzolic Soils (Dr3.21, Dr3.11, Db2.11) on crests, upper slopes and well-drained areas; deep (150-300 cm) Yellow Podzolic Soils and Soloths (Dy2.11, Dy3.11) on lower slopes and in areas of poor drainage. Dominant soil materials include friable brownish-black loam, hard setting brown clay loam, strongly pedal mottled brown light clay, and light grey plastic mottled clays.

The Birrong Soil Landscape is prone to localised flooding and seasonal waterlogging. It is likely that the subject area was part of the Gumbramorra Swamp, which once occupied the Marrickville valley (Meader 2008). However, given its proximity to the Blacktown Soil Landscape and the fluctuation in size of the Gumbramorra Swamp (Meader 2008), the subject area was probably at its margins.

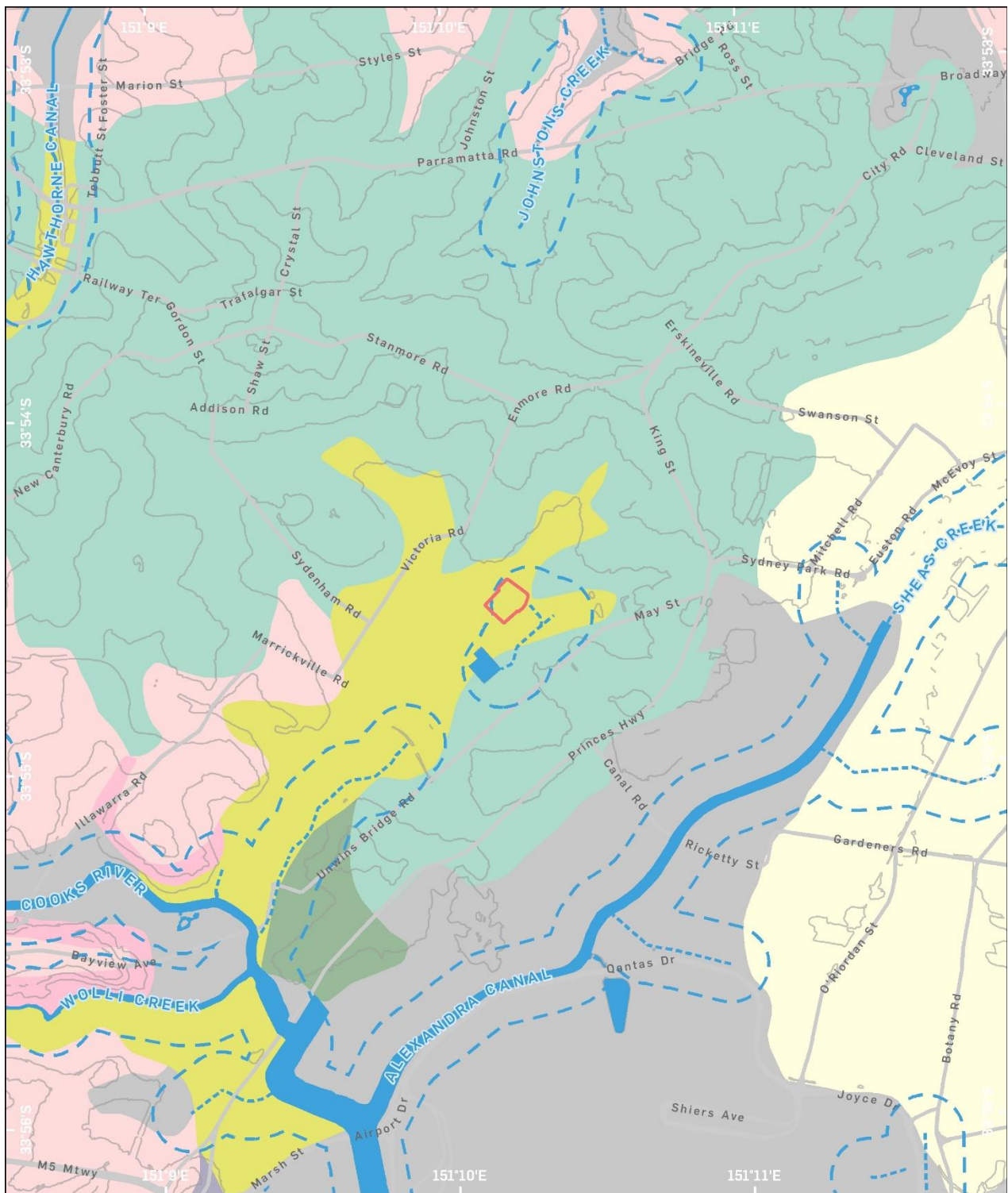
The depth of natural soils is relevant to the potential for archaeological materials to be present, especially in areas where disturbance is high. In general, as disturbance level increases, the integrity of any potential archaeological resource decreases. However, disturbance might not remove the archaeological potential even if it decreases integrity of the resources substantially. Although located close to the shallow Blacktown Soil Landscape, the relatively deep soils of the Birrong Soil Landscape in which the subject area is located may mitigate the effects of ground disturbance on archaeological potential.

As discussed in Section 2.8 below, disturbance is determined to be moderate to high across the subject area, resulting from vegetation clearance, historical commercial and industrial activities and the construction of the canal. However, any impact of ground disturbing activities may be restricted to the upper portions of the natural soil profile. It is considered that archaeological potential may remain in sub-surface deposits where the natural soil profile is intact.

## 2.3. VEGETATION AND RESOURCES

Although the subject area includes a number of mature trees, there is no remnant vegetation currently present due to historical land clearance (see Section 2.8 below). At the time of European settlement, the subject area would likely have been covered in native forest and woodland vegetation consistent with the Birrong soil landscape, including ironbark *Eucalyptus paniculata*, turpentine *Syncarpia glomulifera*, and Sydney blue gum *E. saligna*.

Resources would have included a variety of floral and faunal species that may have been utilised by Aboriginal people for medicinal, ceremonial and subsistence purposes.



GDA 1994 MGA Zone 56

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1 KM

Project No: P0026069

Project Manager: Andrew Crisp

- Subject Area
- Ephemeral
- AETg
- COha
- ERgy
- SWwa
- Water
- Hydrology
- Hydrology 200m Buffer
- ALbg
- DTxx
- REbt
- TRof
- Permanent
- Contours

## SOIL LANDSCAPES AND HYDROLOGY

74 Edinburgh Road, Marrickville

Woolworths Group Limited

Figure 16 – Soil Landscapes and Hydrology

## 2.4. HYDROLOGY

The subject area lies within 200m of a bifurcated concrete-lined canal running in a south-westerly direction towards the Cooks River, approximately 2km away. The canal flows into the Sydenham Pit and Drainage Pumping Station 1 (see Section 1.5.1 above) south-west of the subject, after which it continues underground for approximately 500m before re-emerging as an aboveground canal for the remainder of the distance to the Cooks River. One arm of the canal runs underneath Lot 101 DP 1237269 of the subject area, which is the linear parcel of land dividing the separate portions of Lot 202 DP 1133999 (Figure 4).

As indicated by the 'Plan of Storm Water Drainage Scheme, Marrickville' of 1892 (Figure 17), the canal has replaced a former natural tributary of the Cooks River. The tributary was likely part of the natural drainage system for Gumbramorra Swamp. The arm of the canal running underneath Lot 101 DP 1237269 of the subject area follows a northerly diversion of the natural waterway, while the main line of the canal runs to the east of both the natural waterway and the planned drain of Figure 17. The natural waterway appears to have originally marked the southern and eastern boundaries of the present subject area (Figure 17).

From the AHIMS search results (see Section 2.1.1 and Figure 9) and the generic predictive model for the Cumberland Plain, sites can be anticipated to be higher in frequency and density in proximity to waterways. The proximity of the subject area to the confluence of two natural tributaries suggests a moderate to high potential for finding Aboriginal objects in the subject area.

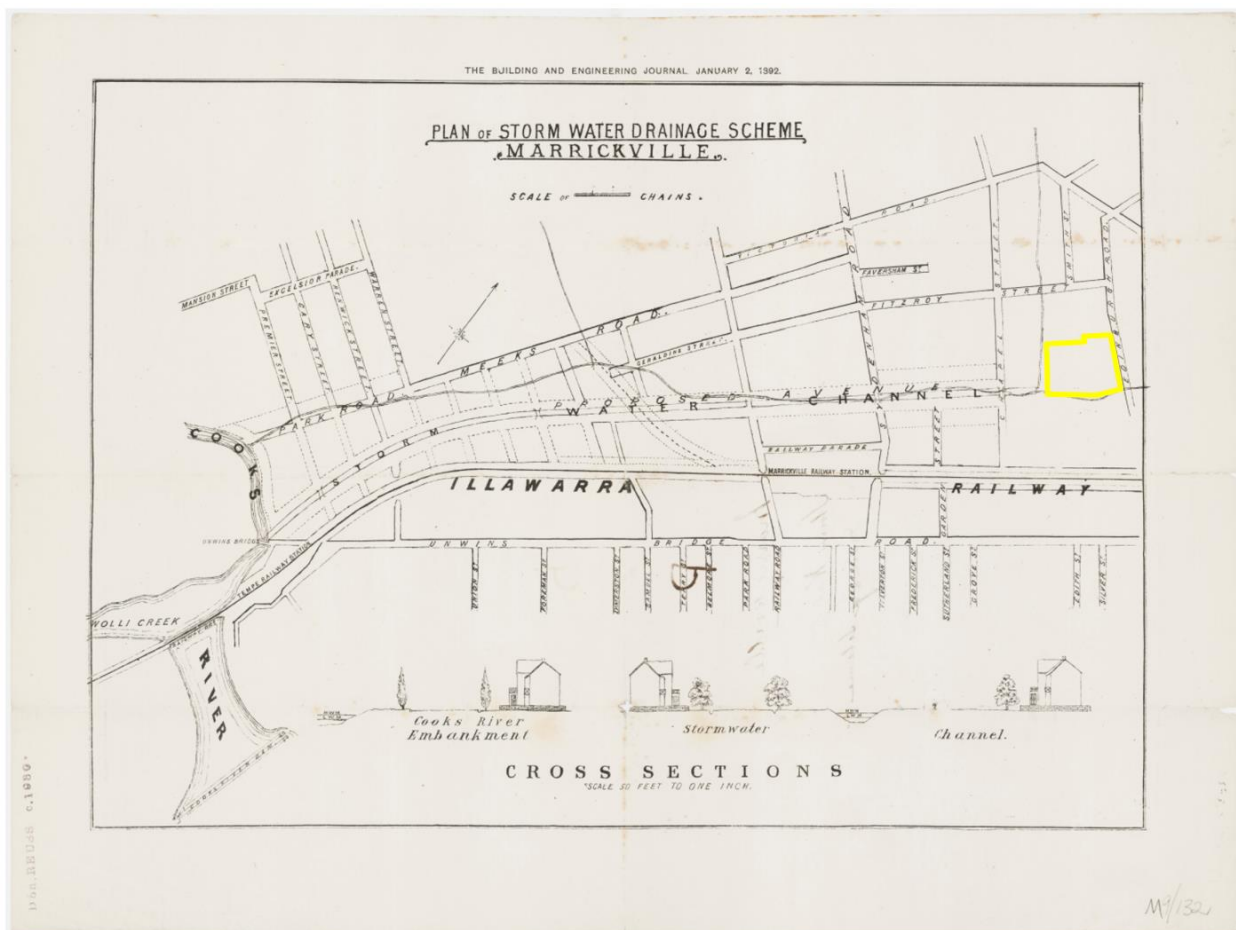


Figure 17 – 'Plan of Storm Water Drainage Scheme, Marrickville' from 1892 with approximate location of subject area indicated by yellow outline

Source: State Library of NSW

## 2.5. LANDFORM

### 2.5.1. Assessment Framework

There are varying morphological types of Landform elements (see Figure 18 and Figure 19). The Australian Soil and Land Survey Field Handbook (CSIRO, 2009) identifies ten landform element types. These types are described in Table 5 below.

Table 5 – Landform Definitions

Type	Definition
Crest (C)	Landform element that stands above all, or almost all, points in the adjacent terrain. It is characteristically smoothly convex upwards in downslope profile or in contour, or both. The margin of a crest element should be drawn at the limit of observed curvature.
Hillock (H)	Compound landform element comprising a narrow crest and short adjoining slopes, the crest length being less than the width of the landform element.
Ridge (R)	compound landform element comprising a narrow crest and short adjoining slopes, the crest length being greater than the width of the landform element.
Simple Slope (S)	Slope element adjacent below a crest or flat and adjacent above a flat or depression.
Upper Slope (U)	Slope element adjacent below a crest or flat but not adjacent above a flat or depression.
Mid Slope (M)	Slope element not adjacent below a crest or flat and not adjacent above a flat or depression.
Lower Slope (L)	Slope element not adjacent below a crest or flat but adjacent above a flat or depression.
Flat (F)	planar landform element that is neither a crest nor a depression and is level or very gently inclined (<3% tangent approximately).
Open Depression (vale) (V)	Landform element that stands below all, or almost all, points in the adjacent terrain. A closed depression stands below all such points; an open depression extends at the same elevation, or lower, beyond the locality where it is observed. Many depressions are concave upwards and their margins should be drawn at the limit of observed curvature.
Closed Depression (D)	Landform element that stands below all, or almost all, points in the adjacent terrain. A closed depression stands below all such points; an open depression extends at the same elevation, or lower, beyond the locality where it is observed. Many depressions are concave upwards and their margins should be drawn at the limit of observed curvature.

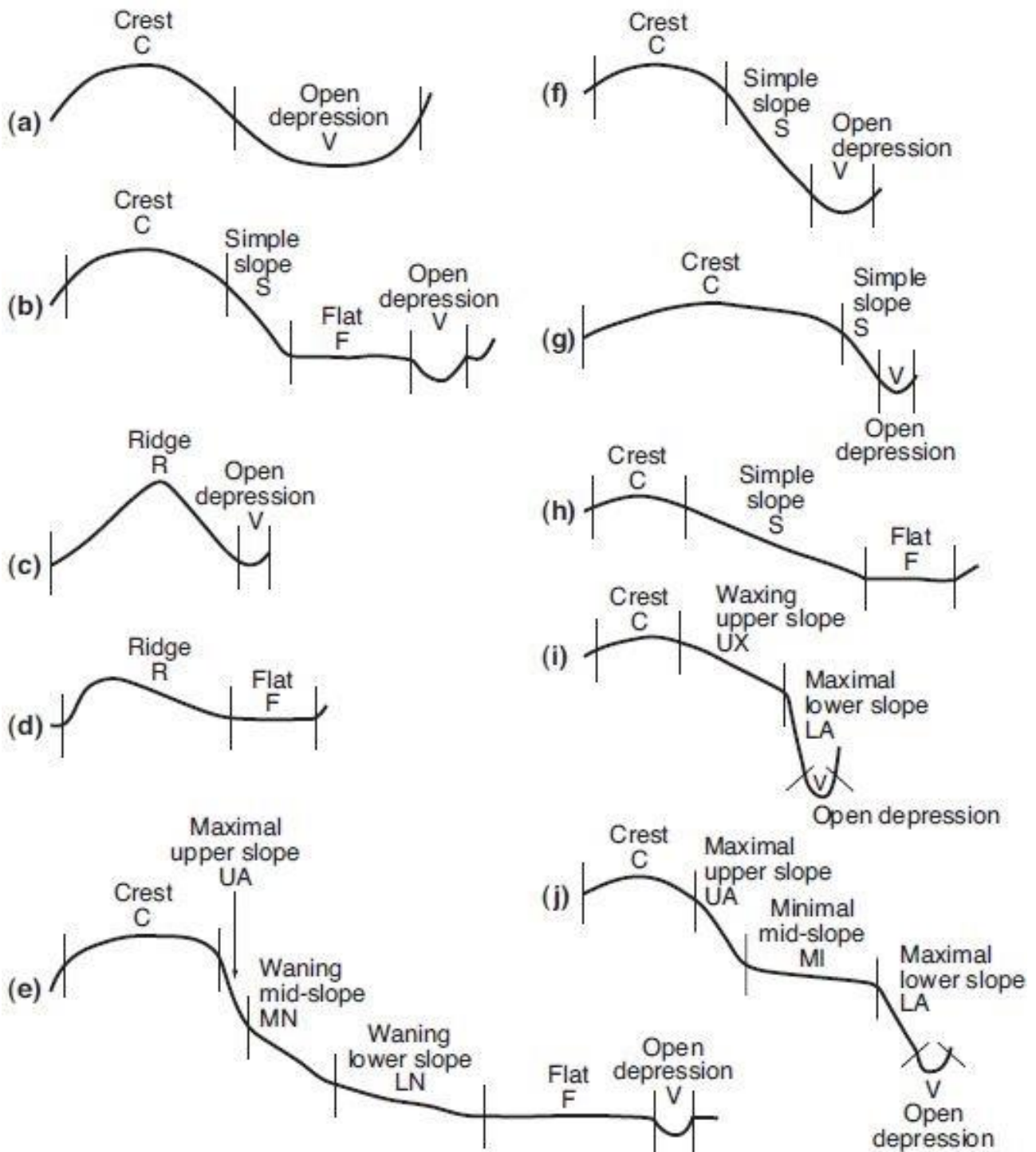


Figure 18 – Landform types  
Source: CSIRO, 2009



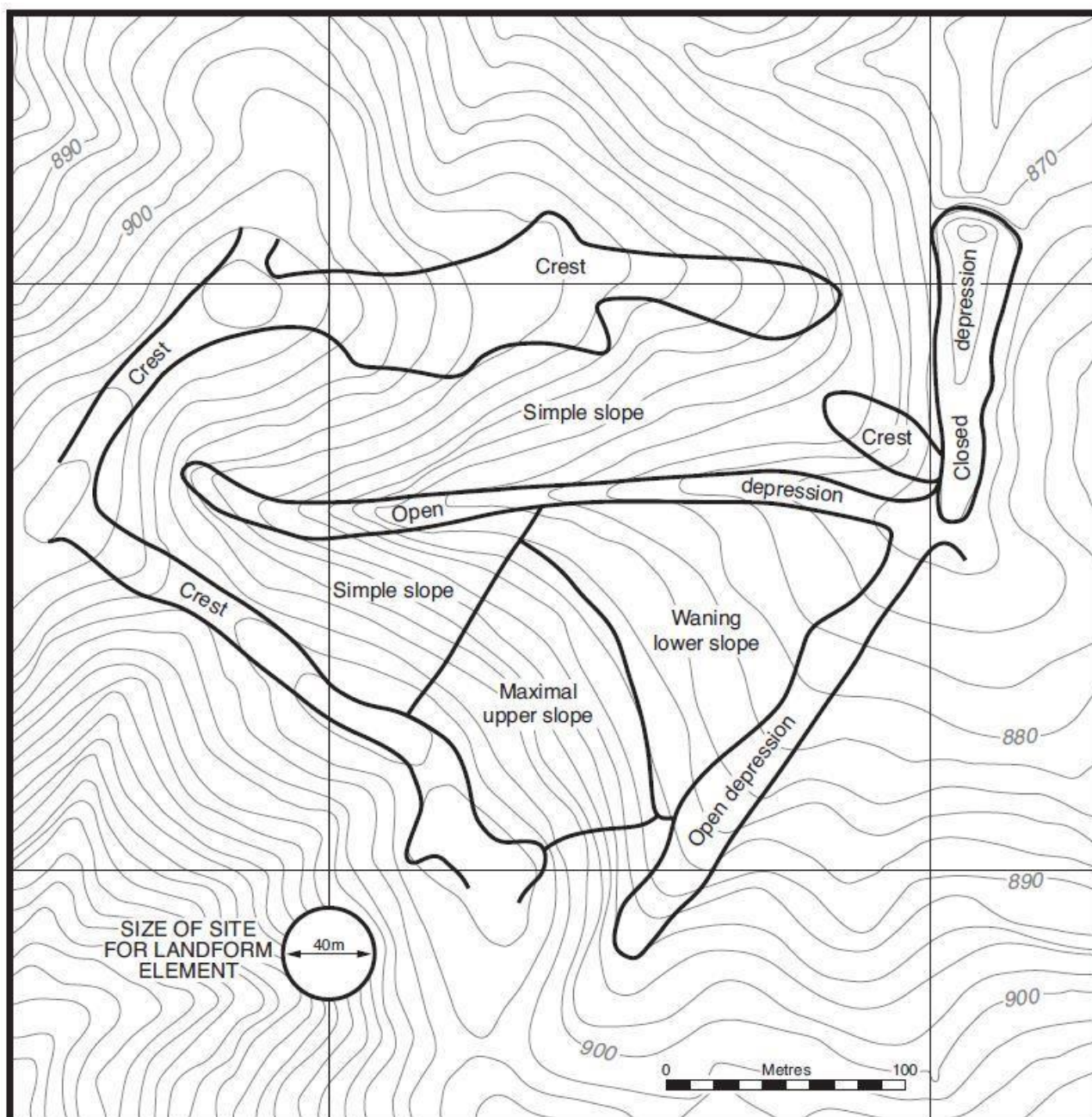


Figure 19 – Landform Patterns.  
Source: CSIRO, 2009

## 2.5.2. Landform Assessment of the Subject Area

The present subject area is generally flat. The flat landform element is neither a crest nor a depression, with only a slight incline in a south-westerly direction in the case of the present subject area. This landform element is not associated with a high potential for Aboriginal objects.

## 2.6. GEOTECHNICAL ANALYSIS

A geotechnical analysis was undertaken in the subject area by JK Geotechnics (2015). The geotechnical analysis provided information on the subsurface conditions as a basis for an acid sulfate soil assessment and management plan for the subject area undertaken by Environmental Investigation Services (2015) for Masters Home Improvement.

Soil samples were obtained from eleven boreholes (BH1 to BH11), the locations of which are shown in Figure 20. The boreholes were drilled to total depths ranging from 1.95m to 12m below the existing ground surface. Borehole logs and are reproduced within Appendix A of this report. The results of the borehole tests are provided in Table 6 below.

The boreholes generally encountered concrete-capped surface fill overlaying natural silty clay that graded into shale bedrock. The silty clay is described as having medium to high plasticity, with colours including orange brown, red brown, light grey or grey mottled orange brown, grey mottled red brown, grey and dark grey. In the five boreholes that encountered bedrock (BH1, BH3, BH4, BH7 and BH8), the thickness of the silty clay layer ranged from 2.5m (BH7) to 9.2m (BH4). Standing water level was measured in the selected boreholes at depths of 2.5 to 8.8 mbgl.

These findings are consistent with Urbis' assessment that the subject area is located in the Birrong Soil Landscape, with ground disturbance likely being limited to the upper fraction of the natural soil profile.

Table 6 – Subsurface conditions encountered in the boreholes

Material	Description
Concrete/Asphaltic Concrete	Surface paving to a maximum depth of approximately 0.3m below ground level (bgl)
Fill	Sandy gravel, silty clay or gravelly silty sand, with gravel or brick inclusions in some cases. Maximum depths are in the range 0.3 to >6mbgl.
Silty Clay	Medium to high plasticity, with colours including orange brown, red brown, grey mottled orange brown, grey mottled red brown, grey and dark grey. Minimum depths range from 0.3 to 1.4 mbgl and maximum depths range from 9.1 to 10.6 mbgl.
Shale Bedrock	Generally grey or dark grey, with iron indurated bands and clay bands. Minimum depths ranging from 4.8 to 10.6 mbgl.

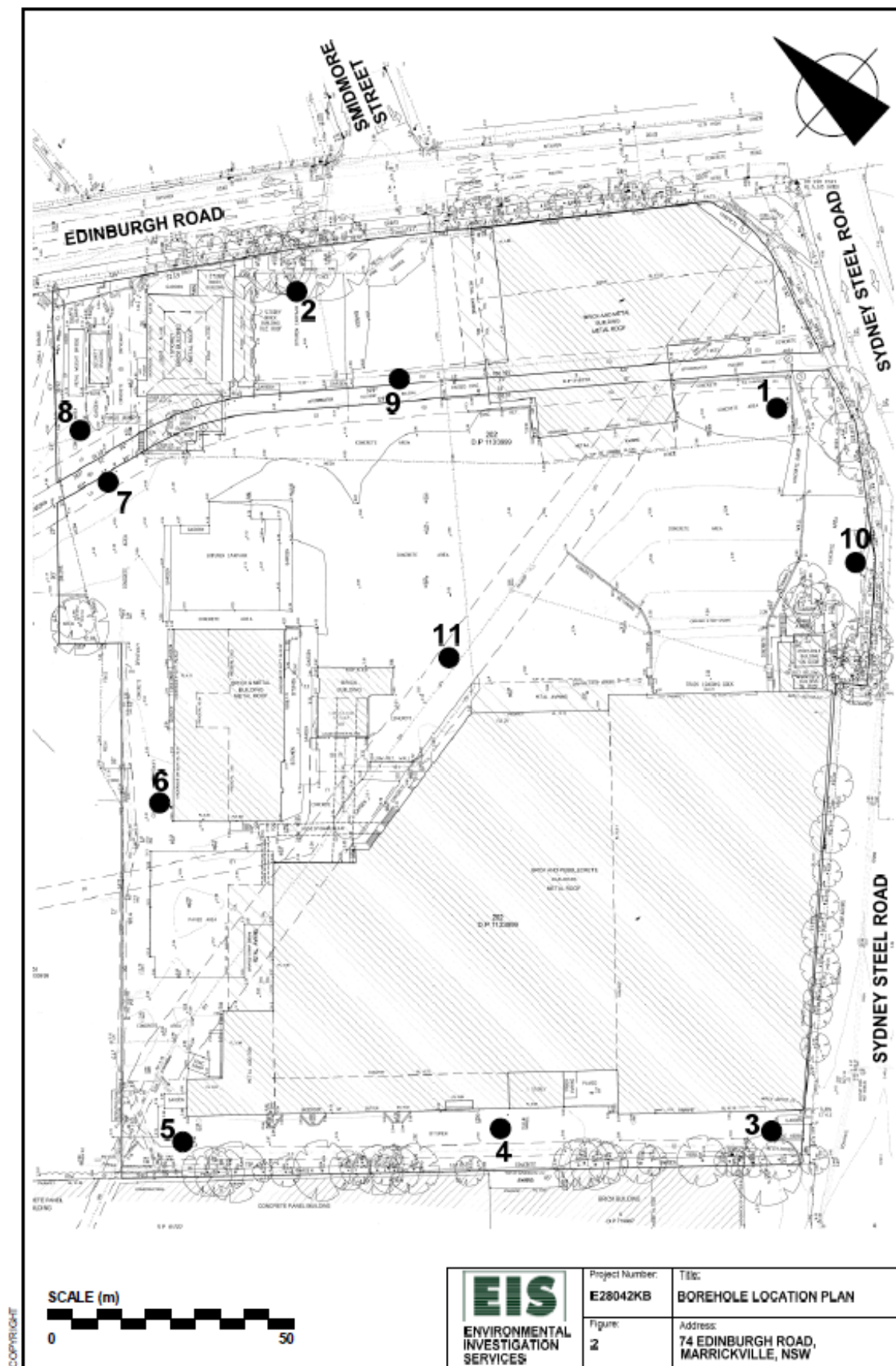


Figure 20 – Geotechnical investigation location plan  
Source: Environmental Investigation Services, 2015



## 2.7. PAST ABORIGINAL LAND USE

Due to the absence of written records, it is difficult to infer what Aboriginal life was like prior to the arrival of European settlers. Much of our understanding of Aboriginal life pre-colonisation is informed by the histories documented in the late 18th and early 19th century by European observers. These histories provide an inherently biased interpretation of Aboriginal life both from the perspective of the observer but also through the act of observation. The social functions, activities and rituals recorded by Europeans may have been impacted by the Observer Effect, also known as the Hawthorne Effect. The Observer/Hawthorne Effect essentially states that individuals will modify their behaviour in response to their awareness of being observed. By comparing/contrasting these early observations with archaeological evidence one can establish a general understanding of the customs, social structure, languages, beliefs and general of the Aboriginal inhabitants of the Sydney Basin (Attenbrow 2010).

Aboriginal people have inhabited the Sydney Basin region since at least 20,000 BP, with some evidence of potential occupation as early as 40,000 years ago (JMCHM 2005a). The Aboriginal population around Sydney at time of first contact has been estimated at between 2000 to 3000 people, with the greater Sydney region estimated at somewhere between 4000 and 8000. Given the early contact with Aboriginal tribes in the Sydney region, more is known about these groups than those which inhabited regional areas. The land of the Sydney region was occupied by the clans of the Eora tribe. The meaning of 'Eora' is unknown, but their land is documented to extend from the Hawkesbury River plateau margins in the north to Botany Bay and the Georges River in the south. There is some controversy regarding the linguistic origins of the Eora People. Some argue that the Eora People were a part of the Darug language group (Kohen, 1993), while others suggest the Eora People formed a distinct and separate language group (Hughes, 1987). The various clans of the Eora people include the Kameraigal, Wanegal, Borogegal and Gadigal. The Gadigal, also known as Cadigal, are believed to have occupied the area bounded by the Cooks River in the south and Port Jackson in the North, extending from Darling Harbour to South Head (Tindale, 1974; Turbett, 1989). This area includes Marrickville and the present subject area.

Prior to European colonisation and development, the lands of the Gadigal people were abundant in resources. The rivers and streams provided both fresh water and edible resources for Aboriginal groups. The diet of the Gadigal people consisted primarily of fish, shellfish and other aquatic animals. The importance of aquatic resources is attested to in the archaeological record, with middens providing evidence of dietary practices located along the coast and waterways. The Gadigal people also sourced roots and foraged for food within the Lachlan Swamplands, now Centennial Park (Tench, 1789). The Gumbramorra Swamp, which once occupied the Marrickville valley, was likely also an important source of plants and animals (Meador 2008). The swamp would have supported a dense growth of thatch reed, which would have provided a suitable habitat for a variety of birds (Meador 2008).

There is abundant evidence throughout the Sydney area of contact between the Gadigal people and European settlers. This evidence exists in the form of contact sites, with material remains including knapped ceramic and glass, European materials in middens, and rock engravings depicting European arrival. The Gumbramorra Swamp provided a refuge for runaway convicts (Meador 2008), potentially bringing about contact and interaction between Aboriginal people and Europeans within or near the present subject area.

Aboriginal people were eventually forced away from their lands and the resources they relied upon. European settlement around the coast drove faunal resources further inland, reducing the traditional hunting grounds of local Aboriginal groups (Evidence, 1835). Diseases including smallpox and conflicts between local Aboriginals and colonisers decimated their population. Rather than accepting fault for this, some colonisers attributed this population decline to the introduction of alcohol and other vices (Dredge, 1845). In 1789, an epidemic believed to be smallpox and called gal-galla by the local Aboriginal people resulted in a significant population decrease (Attenbrow, 2010). Early colonial accounts state:

*'From the great number of dead Natives found in every part of the harbour, it appears that the small pox had made dreadful havoc among them'* (Bradley, 1789).

Other historic accounts of the epidemic state that it resulted in the near complete decimation of the Gadigal clan, with only three people reportedly remaining – two of which were Colbee and Nanbaree (Collins, 1798).

Despite the clear impact European occupation has had and continues to have on the Aboriginal communities of the Cumberland Plain it must be stated that Aboriginal people maintain active and rich lifeways within contemporary Australian society. The contribution Aboriginal communities make to contemporary Australian life must not be understated.

## 2.8. HISTORICAL LAND USE

The history of the subject area is briefly addressed below in Table 7 and is further elaborated in the Historical Archaeological Assessment (HAA) produced by Urbis (2020) for the for the SSDA – 10468, the Heritage Impact Statement (HIS) prepared by Urbis (2020) and appended to the EIS.

Table 7 – Historical overview

Year	Activity
1799	Thomas Moore receives Crown Grant, inclusive of the subject site (Figure 21 and Figure 22). The subject site was overgrown and swampy at this time. Moore was known to use his landholdings in Marrickville as a source of timber, with no built elements or agricultural endeavours known to have taken place on the site during this time.
1870 – 1903	Daniel Bulman purchased the site before selling to his business partner, Christopher Newton. Newton sold to the owners of Wright, Davenport and Co., who operated a tannery from the main street frontage on Victoria Road. There is no evidence that the subject site was developed in this period but may have been used for the purposes of the tannery or as vacant land.
1897	The government drained the Gumbramorra Swamps, improving the area for the purposes of residential and industrial development.
1901	Portion of the site is resumed for drainage under the Public Works Act 1888, for drainage. This followed the draining of the Gumbramorra Swamps.
1903 – 1908	Ashton & Jagelmann Pottery operating on at least the eastern portion of the subject area.
1909 – 1911	James Brough Pottery (and tenants) operating on the eastern portion of subject area, south of stormwater easement (~3 acres).
1908 – 1940	Marrickville Margarine Company, Ltd (aka, Marrickville Margarine Ltd, Marrickville Holdings Limited, Nut Foods Ltd) operating on western portion of subject area. Marrickville Margarine was a notable company established in 1908 by Charles Abel as a response to butter shortages.
1913 – 1940	Richard Taylor Limited operating on the eastern portion of subject area, south of stormwater easement.
1940 –1980s	Marrickville Margarine Ltd (MML) operates from the subject site (Figure 23) and rents out eastern portion until c.1950s.  During World War II, the north eastern portion of the subject site was used to house slit trenches. Should the factories or surrounding residential properties require evacuation due to an air raid, these trenches were intended to provide safety. The trenches are visible in an aerial photograph from 1943 (see Figure 24)
1990s	By the 1990s, Unilever owned the site.

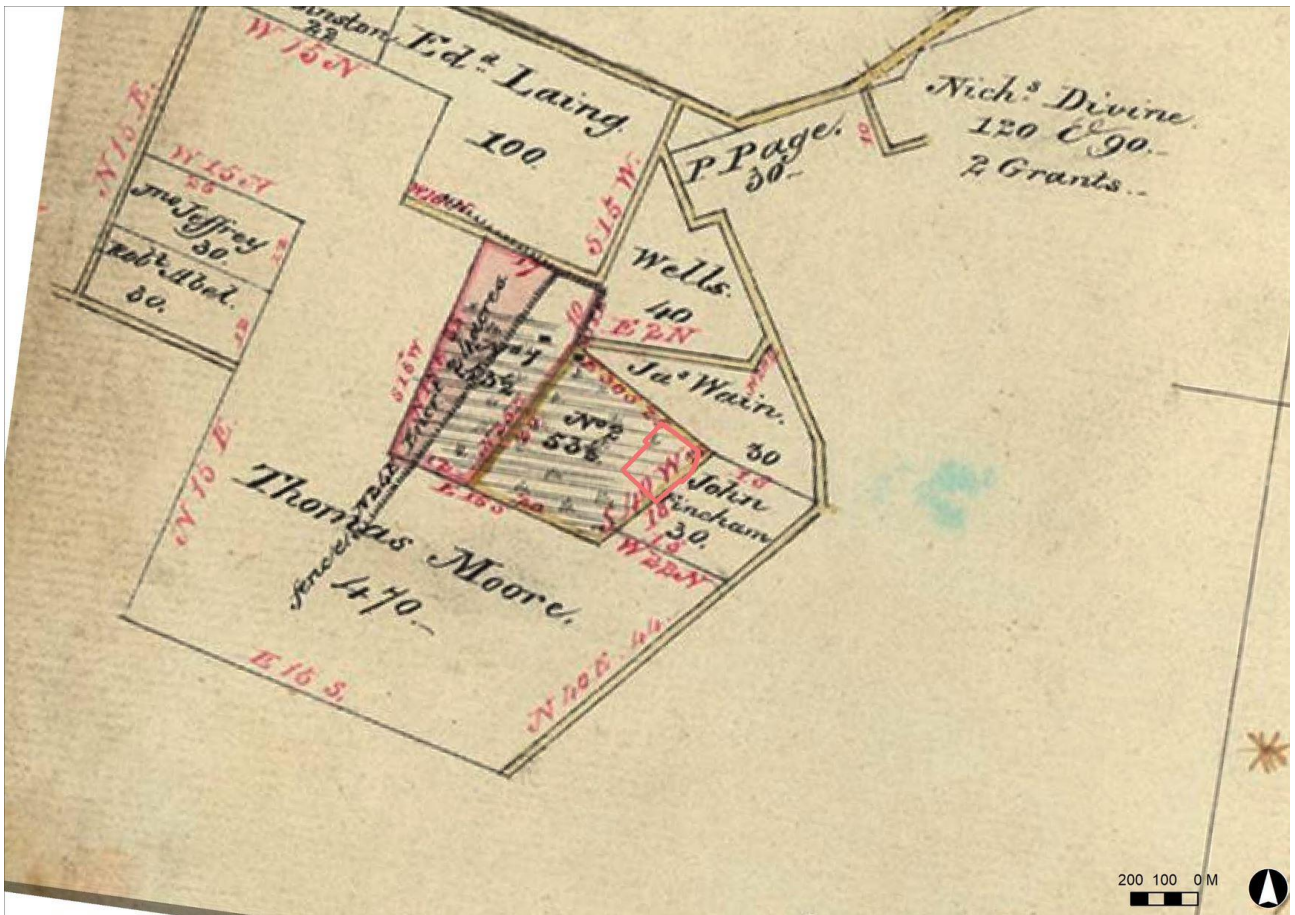


Figure 21 – 1831 surveyor sketch of the Gumbramorra Swamp area, showing the location of early land grants within the area.

Source: Surveyor General sketch book 1, folio 4, State Archives & Records

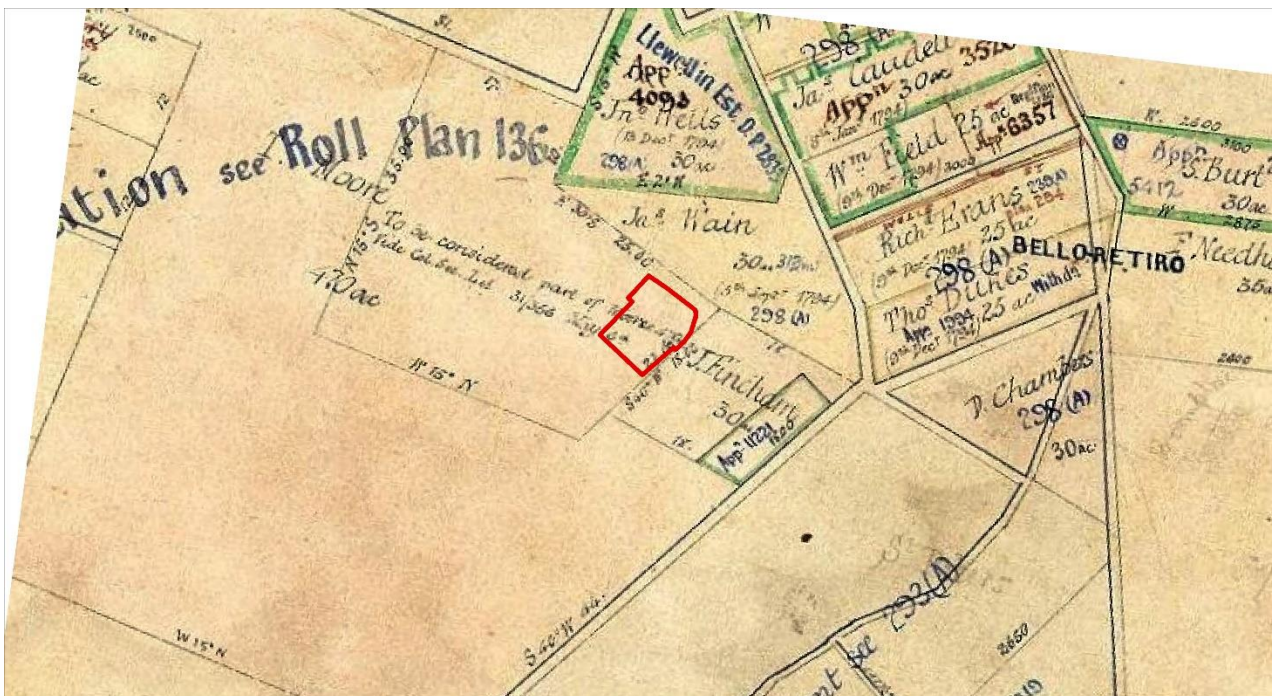


Figure 22 – Undated Parish map, Parish of Petersham, County of Cumberland. Approximate location of the subject site indicated by red polygon.

Source: Inner West Council Library Archives, Local History Collection, 228040





Figure 23 – Map from the Public Works Department, 1873-1953, showing the buildings constructed on site, including the Marrickville Margarine Company identified as occupying the Edinburgh Road frontage.  
Source: Sydney Water Archives, PWDS1544-S949

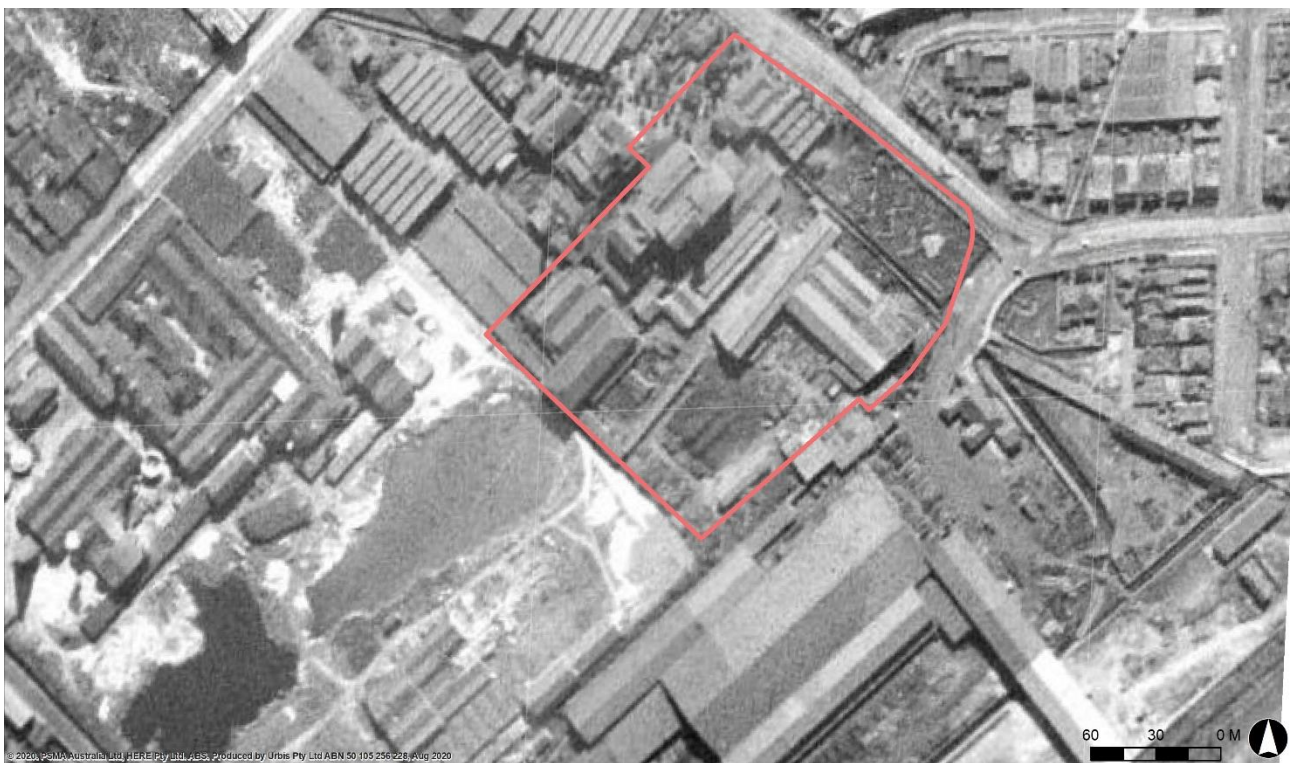


Figure 24 – 1943 aerial of Marrickville, with subject site indicated in red and slit trenches in the north eastern corner. Buildings include saw and tooth roofed factory buildings as well as brick office.  
Source: Spatial Services Web Portal

The development of facilities within the subject area has caused a degree of ground disturbance. This is demonstrated through the analysis of historic aerals. Historic aerial images from 1930, 1961, 1994 and 2020 were analysed to develop an understanding of disturbance (see Figure 25) and is included in Table 8.

Table 8 – Analysis of historical aerals

Year	Observation
1930	By 1930, the subject area had already been substantially cleared of vegetation and established as a developed industrial/commercial site. Various buildings had been constructed across the subject area, particularly in the northern-western portion. These buildings likely included those depicted in Figure 26. Some open areas remained within the subject area, such as the north-east corner and a courtyard area in the south-east quadrant. The canal running underneath Lot 101 DP 1237269 of the subject area was already built by this time.
1961	By 1961, a number of additional buildings had been constructed in the south-eastern portion of the subject area. Earlier buildings in the north-western portion adjacent the canal had been demolished and new, larger buildings constructed. This is evident in a comparison of Figure 26 and Figure 27. Open areas remained in the north-east corner and a courtyard area in the south-east quadrant.
1994	By 1994, a number of the older buildings had been demolished across the subject area, exposing concrete slab in their place. These included some of the earliest saw-tooth buildings in the western corner of the subject area. A large warehouse had been built in the southern corner and the previously open areas in the north-east corner and a courtyard area in the south-east quadrant were developed by this time. The entire subject area was paved, except for a scattering of mature trees.
2020	The only changes observed from the previous photography are the demolition of several buildings in the northern quadrant of the subject area and the construction of a new building on the north western boundary.

Based on the historical aerals, the entire subject area has been impacted by its historical use as an industrial/commercial site and the construction of the canal to replace the natural waterway.

Lot 101 DP 1237269 is considered to have been subjected to high disturbance due to the construction of the canal. Lot 202 DP 1133999 is likely to have experienced moderate to high disturbance, primarily due to the construction of buildings and erosion associated with land clearance and subsequent use of the site prior to laying of the existing concrete slab.

The moderate to high ground disturbance across the subject area does not entirely remove the archaeological potential of the subject area. The paving of the subject area may have served to preserve any underlying archaeological deposits from the impacts of erosion and human land-use. Furthermore, as noted in Section 2.2, the depth of the natural soil profile may mitigate the impacts of ground disturbance, with the potential for sub-surface archaeological deposits to remain considered moderate to high.



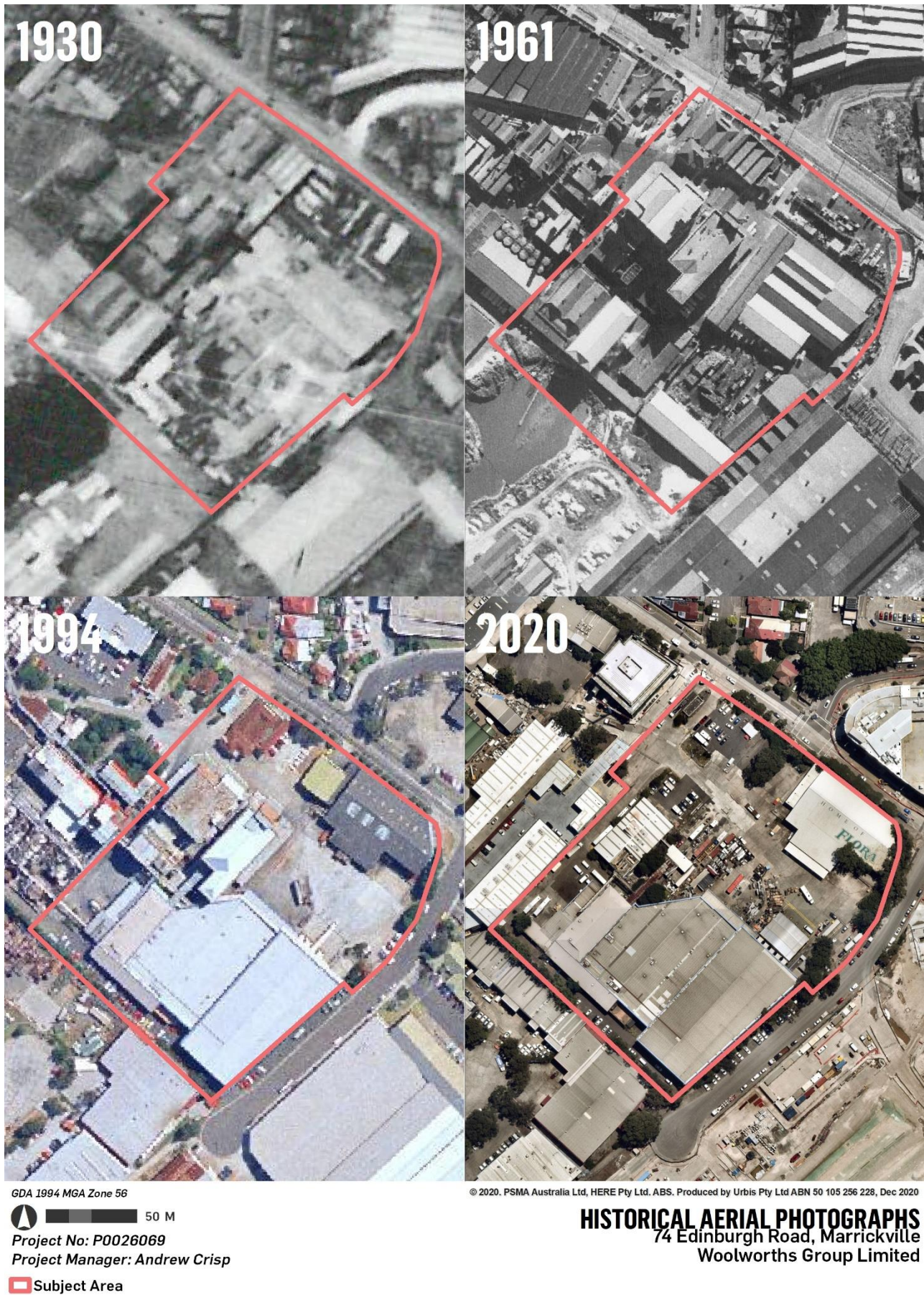


Figure 25 - Historical Aerial Imagery





Figure 26 – Exterior of the Marrickville Margarine factory (ca. 1920s), which was formerly located in the subject area  
Source: *State Library of NSW*



Figure 27 – Exterior of the Marrickville Margarine factory (1962), which was formerly located in the subject area  
Source: *State Library of NSW*

## 2.9. PREDICTIVE MODEL

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* requires that an appropriate predictive model be used when undertaking an ACHA. A predictive model is used to estimate the nature and distribution of evidence of Aboriginal land use in a subject area. The results produced by a predictive model can be used to identify PADs.

A predictive model should consider variables that may influence the location, distribution and density of sites, features or artefacts within a subject area. Variables typically relate to the environment and topography, such as soils, landscape features, slope, landform and cultural resources. The following predictions for the subject area have been formulated on the basis of previous assessments, regional models and the AHIMS data provided above.

There are several site types which are known to occur within New South Wales. These site types and their likelihood to occur within the subject area are evaluated in Table 10 below.

The general process archaeologists employ to determine the likelihood of any particular site type (artefact scatter, shelter, midden etc) to occur within a given subject area requires the synthesis of information for general distribution of archaeological sites within the wider area including:

- Detailed analysis of previous archaeological investigations within the same Region;
- Presence or absence of landscape features that present potential for archaeological resources (human occupation, use) such as raised terraces adjacent to permanent water;
- Analysis of the geology and soil landscape within the subject area which allows for a determination to be made of the type of raw material that would have been available for artefact production (silcrete, tuff, quartz etc) and the potential for the accumulation of archaeological resource within the subject area; and
- Investigation of and determination of the level of disturbance/historical land use within the subject area which may impact on or remove entirely any potential archaeological material.

The combination of these would give us an indication of various levels of possibility of finding archaeological resource within a given area. Please refer to Table 9 below for an example of the indicative process of determining the likelihood of a given site occurring within a subject area.

Table 9 – Indicative process of determining the likelihood of a given site occurring within a subject area

Likelihood	Indicative subject area context	Indicative action
High	Low level of disturbance, presence of one or more archaeologically sensitive landforms (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc), presence of previously recorded archaeological site(s) and/or identification of previously unrecorded archaeological site(s) within the subject area	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.
Moderate	Moderate level of disturbance, presence of one or more archaeologically sensitive landforms (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc), presence of previously recorded archaeological site(s) and/or identification of previously unrecorded archaeological site(s) within the subject area	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.



<b>Likelihood</b>	<b>Indicative subject area context</b>	<b>Indicative action</b>
Low	High level of disturbance, presence of one archaeologically sensitive landforms (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc).	Employ chance finds procedure and works can continue without further archaeological investigation.
Nil	Complete disturbance, complete removal of natural soil landscape, zero archaeologically sensitive landform, geological or soil features. Zero previously recorded archaeological sites.	Employ chance finds procedure and works can continue without further archaeological investigation.

Table 10 – Predictive Model

Site Type	Description	Likelihood	Justification
Artefact Scatters	Artefact scatters represent past Aboriginal subsistence and stone knapping activities and include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface scatters of stone artefacts in areas where vegetation is limited, and ground surface visibility increases. Such scatters of artefacts are also often exposed by erosion, agricultural events such as ploughing, and the creation of informal, unsealed vehicle access tracks and walking paths. These types of sites are often located on dry, relatively flat land along or adjacent to rivers and creeks. Camp sites containing surface or subsurface deposit from repeated or continued occupation are more likely to occur on elevated ground near the most permanent, reliable water sources. Flat, open areas associated with creeks and their resource-rich surrounds would have offered ideal camping areas to the Aboriginal inhabitants of the local area.	Moderate	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the confluence of two former natural waterways.</li> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
Isolated Finds	<p>Isolated finds represent artefactual material in singular, one off occurrences. Isolated finds are generally indicative of stone tool production, although can also include contact sites.</p> <p>Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility. Isolated artefacts are likely to be located on landforms associated with past Aboriginal activities, such as ridgelines that would have provided ease of movement through the area, and level areas with access to water, particularly creeks and rivers.</p>	Moderate	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the confluence of two former natural waterways.</li> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
PAD	Potential Archaeological Deposits (or PADs) are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits of stone artefacts. Landscape features which may feature in PADs include proximity to waterways, particularly terraces and flats	High	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the confluence of two former natural waterways.</li> </ul>

Site Type	Description	Likelihood	Justification
	near 3rd order streams and above; ridge lines, ridge tops and sand dune systems.		<ul style="list-style-type: none"> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
Scarred Trees	Tree bark was utilised by Aboriginal people for various purposes, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments (sources cited in Attenbrow 2002: 113). The removal of bark exposes the heart wood of the tree, resulting in a scar. Trees may also have been scarred in order to gain access to food resources (e.g. cutting footholds so as to climb the tree and catch possums or birds), or to mark locations such as tribal territories. Such scars, when they occur, are typically described as scarred trees. These sites most often occur in areas with mature, remnant native vegetation. The locations of scarred trees often reflect an absence of historical clearance of vegetation rather than the actual pattern of scarred trees. Carved trees are different from scarred trees, and the carved designs may indicate totemic affiliation (Attenbrow 2002: 204); they may also have been carved for ceremonial purposes or as grave markers.	Nil	<ul style="list-style-type: none"> <li>The subject area does not include vegetation of a suitable age to bear cultural modification.</li> </ul>
Axe Grinding Grooves	Grinding grooves are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone. They may be associated with creek beds, or water sources such as rock pools in creek beds and on platforms, as water enables wet-grinding to occur.	Low	<ul style="list-style-type: none"> <li>The subject area does not include any surface outcrops of sandstone, although subsurface sandstone may be present.</li> </ul>
Bora/Ceremonial	Aboriginal ceremonial sites are locations that have spiritual or ceremonial values to Aboriginal people. Aboriginal ceremonial sites may comprise natural landforms and, in some cases, will also have archaeological material. Bora grounds are a ceremonial site type, usually consisting of a cleared area around one or more raised earth circles, and often comprised of two circles of different	Low	<ul style="list-style-type: none"> <li>Historical land use in the subject area is likely to have destroyed any bora grounds or ceremonial sites.</li> </ul>

Site Type	Description	Likelihood	Justification
	sizes, connected by a pathway, and accompanied by ground drawings or mouldings of people, animals or deities, and geometrically carved designs on the surrounding trees.		
Burial	<p>Aboriginal burial of the dead often took place relatively close to camp site locations. This is due to the fact that most people tended to die in or close to camp (unless killed in warfare or hunting accidents), and it is difficult to move a body long distance.</p> <p>Soft, sandy soils on, or close to, rivers and creeks allowed for easier movement of earth for burial; and burials may also occur within rock shelters or middens. Aboriginal burial sites may be marked by stone cairns, carved trees or a natural landmark. Burial sites may also be identified through historic records or oral histories.</p>	Low	<ul style="list-style-type: none"> <li>The subject area is not situated on soft, sandy soils.</li> </ul>
Contact site	These types of sites are most likely to occur in locations of Aboriginal and settler interaction, such as on the edge of pastoral properties or towns. Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics by Aboriginal people or be sites of Aboriginal occupation in the historical period.	Moderate	<ul style="list-style-type: none"> <li>The subject area would have been at the margins of European settlement during the 19<sup>th</sup> century.</li> </ul>
Midden	Midden sites are indicative of Aboriginal habitation, subsistence and resource extraction. Midden sites are expressed through the occurrence of shell deposits of edible shell species often associated with dark, ashy soil and charcoal. Middens often occur in shelters, or in eroded or collapsed sand dunes. Middens occur along the coast or in proximity to waterways, where edible resources were extracted. Midden may represent a single meal or an accumulation over a long period of time involving many different activities. They are also often associated with other artefact types.	Low	<ul style="list-style-type: none"> <li>Although located adjacent to waterways, it is likely that the subject area is too far upstream for a midden to be present.</li> </ul>
Art	Art sites can occur in the form of rock engravings or pigment on sandstone outcrops or within shelters (discussed below). An engraving is some form of image which has been pecked or carved into a rock surface. Engravings typically vary in size and nature, with small abstract geometric forms	Nil	<ul style="list-style-type: none"> <li>The subject area does not include any surface outcrops of sandstone, although subsurface sandstone may be present.</li> </ul>



Site Type	Description	Likelihood	Justification
	<p>as well as anthropomorphic figures and animals also depicted (DECCW, 2010c). In the Sydney region engravings tend to be located on the tops of Hawkesbury Sandstone ridges where vistas occur. Pigment art is the result of the application of material to a stone to leave a distinct impression. Pigment types include ochre, charcoal and pipeclay. Pigment art within the Sydney region is usually located in areas associated with habitation and sustenance.</p>		<ul style="list-style-type: none"> <li>Geological data does not suggest that sandstone outcropping will be located sub-surface.</li> </ul>
Shelters	<p>Shelter sites are places of Aboriginal habitation. They take the form of rock overhangs which provided shelter and safety to Aboriginal people. Suitable overhangs must be large and wide enough to have accommodated people with low flooding risk. Due to the nature of these sites, with generic rock overhangs common particularly in areas with an abundance of sandstone, their use by Aboriginal people is generally confirmed through the correlation of other site types including middens, art, PAD and/or artefactual deposits.</p>	Nil	<ul style="list-style-type: none"> <li>The subject area does not include any rock overhangs.</li> </ul>

### 3. CONSULTATION PROCESS

In administering its statutory functions under Part 6 of the NSW National Parks and Wildlife Act 1974, the Department of Premier and Cabinet (DPC) requires that Proponent consult with Aboriginal people about the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within any given development area in accordance with Clause 80c of the *NSW National Parks and Wildlife Regulation*, 2009.

The DPC maintains that the objective of consultation with Aboriginal communities about the cultural heritage values of Aboriginal objects and places is to ensure that Aboriginal people have the opportunity to improve ACHA outcomes (DECCW 2010a) by:

- Providing relevant information about the cultural significance and values of Aboriginal objects and/or places;
- Influencing the design of the method to assess cultural and scientific significance of Aboriginal objects and/or places;
- Actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal objects and/or places within the proposed subject area: and
- Commenting on draft assessment reports before they are submitted by the Proponent to the DPC.

Consultation in line with the Consultation Requirements (DECCW 2010) is a formal requirement where a Proponent is aware that their development activity has the potential to harm Aboriginal objects or places. The DPC also recommends that these requirements be used when the certainty of harm is not yet established but a Proponent has, through some formal development mechanism, been required to undertake a cultural heritage assessment to establish the potential harm their proposal may have on Aboriginal objects and places.

Consultation for this assessment, has been undertaken in accordance with the Consultation Requirements, while meeting current industry standards for community consultation.

The Consultation Requirements outline a four-stage consultation process that includes the following:

Stage 1 – Notification of project proposal and registration of interest.

Stage 2 – Presentation of information about the proposed project.

Stage 3 – Gathering information about the cultural significance.

Stage 4 – Review of draft cultural heritage assessment report.

The document also outlines the roles and responsibilities of the DPC, Registered Aboriginal Parties (RAPs) including Local Aboriginal Land Councils, and Proponents throughout the consultation process.

To meet the requirements of consultation it is expected that Proponents will:

- Bring the RAPs, or their nominated representatives, together and be responsible for ensuring appropriate administration and management of the consultation process.
- Consider the cultural perspectives, views, knowledge and advice of the RAPs involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal objects(s) and/or places(s).
- Provide evidence to the DPC of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the RAPs.
- Accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report.
- Provide copies of the cultural heritage assessment report to the RAPs who have been consulted.

The consultation process undertaken to seek active involvement from relevant Aboriginal representatives for the Project followed the current NSW statutory guideline, namely, the Consultation Requirements. Section 1.3 of the Consultation Requirements describes the guiding principles of the document. The principles have been derived directly from the principles section of the Australian Heritage Commission's Ask First: A guide to respecting Indigenous heritage places and values (Australian Heritage Commission 2002).

The following outlines the process and results of the consultation conducted during this assessment to ascertain and reflect the Aboriginal cultural heritage values of the subject area. Further information in regard to the Aboriginal community consultation processed is outlined in Appendix C.

### 3.1. STAGE 1: NOTIFICATION OF PROJECT PROPOSAL AND REGISTRATION OF INTEREST

#### 3.1.1. Government Organisation Contacts

The aim of Stage 1 is to identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the subject area.

A search of the Register of Native Title Claims and the National Native Title Register was undertaken on 25 August 2020. The search did not identify any Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area. The subject area is a freehold tenure which extinguishes Native Title.

To identify Aboriginal people who may be interested in registering as Aboriginal parties for the project, the organisations stipulated in Section 4.1.2 of the Consultation Guidelines were contacted (refer to Table 11).

Table 11 – Contacted Organisations

Organisation	Date notification sent	Date response received
National Native Title Tribunal	25/08/2020	26/08/2020
Heritage NSW, Department of Premier and Cabinet	26/08/2020	28/08/2020
Office of the Registrar, Aboriginal Land Rights Act 1983	26/08/2020	01/09/2020
NTS Corp	26/08/2020	n/a
Metropolitan Local Aboriginal Land Council	26/08/2020	n/a
Local Land Services, Greater Sydney	26/08/2020	n/a
Inner West Council	26/08/2020	03/09/2020

The template for the emails sent to the above-mentioned organisations is at Appendix C. A total of 45 Aboriginal groups and individuals with an interest in the subject area were identified following this stage. These groups were contacted, with further information presented at Section 3.1.2 below.

#### 3.1.2. Registration of Interest

In accordance with Section 4.1.3 of the Consultation Guidelines, letters were sent to the 45 Aboriginal groups and individuals via email on 7 September 2020, or by post on 8 September 2020 (depending on the method identified by each group), to notify them of the proposed project. A total of 39 were sent via email, with 8 sent by express post. The letters afforded a response time of greater than 14 days, being 9 October 2020 in accordance with the 14-day minimum requirement. The letter template is shown at Appendix C and includes a brief introduction to the project and the project location.

A total of sixteen (16) groups registered interest in the project as a result of this phase within the nominated timeframe (Table 12). Acknowledgement emails or telephone calls were made by Urbis to respondents, to confirm registration had been received.

Table 12 – Stage 1 Consultation – Registration of Interest

Organisation/Individual	Contact Person
Metropolitan Local Aboriginal Land Council	Selina Timothy
Inner West Council Aboriginal Community Advisory Committee	Deborah Lennis
A1 Indigenous Services	Carolyn Hickey
Barking Owl Aboriginal Corporation	Jody Kulakowski
Butucarbin Aboriginal Corporation	Lowanna Gibson
Didge Ngunawal Clan	Lilly Carroll & Paul Boyd
Ginninderra Aboriginal Corporation	Steven Johnson & Krystle Carroll
Gulaga	Wendy Smith
Kamilaroi Yankuntjatjara Working Group	Phil Khan
Merrigarn	Shaun Carroll
Muragadi Heritage Indigenous Corporation	Jesse Johnson
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson & Darleen Johnson
Ngambaa Cultural Connections	Kaarina Slater
Thoorga Nura	John Carriage
Wailwan Aboriginal Group	Philip Boney
Widescope Indigenous Group	Steven Hickey & Donna Hickey

### 3.1.3. Newspaper advertisements

In accordance with Section 4.1.3 of the Consultation Guidelines, an advertisement was placed in one local newspaper, the Koori Mail. This advertisement was published in the Koori Mail paper on 9<sup>th</sup> September 2020 providing 14 days to register an interest in accordance with the Consultation Requirements. A copy of the advertisement is included at Appendix C.

The list of Registered Aboriginal Parties (RAPs) was provided to the DPC and the Metropolitan Local Aboriginal Land Council on the 14<sup>th</sup> October 2020 (see Appendix C).

## 3.2. STAGE 2: PRESENTATION OF INFORMATION ABOUT THE PROPOSED PROJECT

The aim of Stage 2 is to provide registered Aboriginal parties with information about the scope of the proposed project, and the proposed cultural heritage assessment process. A Stage 2 and 3 Information Pack which included a brief introduction to the project, the project location, and AHIMS search result to provide understanding of the registered cultural sites in the local area, was sent to registered Aboriginal parties via email on the 12<sup>th</sup> October 2020. Request for response to the Stage 2/3 Information Packet was set to 9<sup>th</sup> November 2020.

## 3.3. STAGE 3: GATHERING INFORMATION ABOUT CULTURAL SIGNIFANCE

Stage 3 is concerned with gathering feedback on a project, proposed methodologies, and obtaining any cultural information that registered Aboriginal parties wish to share. This may include ethno-historical



information, or identification of significant sites or places in the local area. Five responses were received to the Stage 2 and 3 Information Pack. These responses are included in Appendix C and addressed in Table 13 below.

Table 13 – RAP responses to the Stage 2/3 Information Pack

<b>RAP</b>	<b>Response</b>	<b>Urbis Response</b>
Kamilaroi Yankuntjatjara Working Group	I have read your ACHA report, we agree and support your report regarding 74 Edinburgh Rd, Marrickville	Acknowledged and included in consultation log.
Muragadi Heritage Indigenous Corporation	I have read the project information and proposed methodology for the above project, I agree with the recommendations made.	Acknowledged and included in consultation log.
Murra Bidgee Mullangari Aboriginal Corporation	I have read the project information and methodology method for the above project, I endorse the recommendations made.	Acknowledged and included in consultation log.
Ngambaa Cultural Connections	Ngambaa Cultural connections has no further comments	Acknowledged and included in consultation log.
Widescope Indigenous Group	I have reviewed and support the recommendations out lined in the Aboriginal Cultural Heritage Assessment (ACHA)	Acknowledged and included in consultation log.

### 3.3.1. Archaeological site inspection and meeting

Following the close of the Stage 2/3 Information Package review period a site survey was conducted on the 12<sup>th</sup> of November 2021. The site survey was directed by Urbis Senior Archaeologist Andrew Crisp with six members of the RAPs in attendance. The site survey RAP attendees are provided below in Table 14.

Table 14 – Stage 3 site inspection roster

<b>Time</b>	<b>Registered Aboriginal Party</b>	<b>Group Representative</b>
9am-10am	Barking Owl Aboriginal Corporation	Jody K
	Kamilaroi Yankuntjatjara Working Group (KYWG)	Adam Gunther
	Murrabidgee Mullangari	Serina Forscott
	Muragadi Heritage Indigenous Corporation	Kody King
	Ginninderra Aboriginal Corporation	Krystle Carroll
	Butucarbin Aboriginal Coproration	Lowanna Gibson

The purpose of the site inspections and meetings was to conduct a thorough briefing with the RAPs about the proposed development, conduct a walkover of the subject area, discuss the information provided in the Stage 2 and 3 correspondence and any potential archaeological mitigation strategies (Figure 28 and Figure 29).

Registered Aboriginal Parties were provided the opportunity to provide verbal feedback on site and also submit any written information via email if. A comprehensive photographic record was taken during each site inspection.

Surface visibility within the subject area was considered zero due to complete hardstand over or structures across the entirety of the subject area's open space. No internal access was required, however, close inspection of the perimeter of each structure on site was conducted (Figure 30, Figure 31, Figure 32 and Figure 33,).



Figure 28 – Shot of RAP site officers within subject area. Aspect north-west



Figure 29 – Entrance to subject area from Edinburgh Road. Aspect south-west



Figure 30 – View south-west from north-east corner of subject area.



Figure 31 – View of ex-Flora factory shed. Aspect south-east



Figure 32 – View of extant large shed in northern portion of subject area. Aspect south-west



Figure 33 – View of loading bay on north-eastern side of large industrial building in south-western corner of subject area. Aspect south-west

### 3.4. STAGE 4: REVIEW OF DRAFT CULTURAL HERITAGE ASSESSMENT REPORT

The aim of Stage 4 is to prepare and finalise an ACHAR with input from registered Aboriginal Parties.

A Draft of the present ACHAR was sent to RAPs via email on the 13<sup>th</sup> January 2021 with comment on the Draft ACHAR requested prior to the 10<sup>th</sup> February 2021. It is noted that the time allowed for comment should reflect the size and complexity of the project.

One response from a RAP was received on the Stage 4 Draft ACHAR. This response is included in Appendix C and addressed in Table 13 below.

Table 15 – RAP responses to the Stage 4 Draft ACHAR

RAP	Response	Urbis Response
Kamilaroi Yankuntjatjara Working Group	Thankyou for your ACHA report regarding 74 Edinburgh Rd, Marrickville, we agree and support all your recommendations & look forward to working with you and the team on this project	Acknowledged and included in consultation log.

## **4. SUMMARY AND ANALYSIS OF BACKGROUND INFORMATION**

### **4.1. SUMMARY OF BACKGROUND INFORMATION AND RESULTS**

Below is a succinct summary following on from the Aboriginal consultation process, desktop research (AHIMS results, archaeological and landscape context, development history of the subject area) and predictive modelling:

- There are no registered Aboriginal objects and/or archaeological sites within the subject area.
- The original landscape is covered by between 0.7–1.3 m of imported fill and the ground surface visibility within the subject area is considered zero.
- There are landscape features with potential for Aboriginal objects or archaeological deposits located within the subject area.
- Despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments indicates that there is likely to be some remaining archaeological potential at the site. This report concludes that there is moderate-high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.
- Additional investigation is considered warranted in the form archaeological monitoring to establish the presence or absence of Aboriginal objects and archaeological resources within the subject area.
- No additional Aboriginal cultural heritage values have been identified by the RAPs.
- The RAPs have expressed their support for the proposed recommendations and additional works.



## **5. CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE**

### **5.1. METHODS OF ASSESSING HERITAGE SIGNIFICANCE**

Heritage significance is assessed by considering each cultural, or archaeological site, against the significance criteria set out in the Assessment Guidelines. In all cases, the assessment of significance detailed below is informed by the Aboriginal community, which is documented in this report. If any culturally sensitive values were identified they would not be specifically included in the report, or made publicly available, but would be documented and lodged with the knowledge holder providing the information.

### **5.2. ASSESSMENT FRAMEWORK**

The Burra Charter (Australia ICOMOS 1999) defines the basic principles and procedure to be observed in the conservation of important places. It provided the primary framework within which decisions about the management of heritage sites should be made. The Burra Charter defines cultural significance as being derived from the values listed below.

#### **5.2.1. Social or Cultural Value**

Social or cultural value refers to the spiritual, traditional, historical or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural values is how people express their connection with a place and the meaning that place has for them.

Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities can experience a sense of loss should a place of social or cultural value be damaged or destroyed.

There is not always a consensus about a place's social or cultural value. When identifying values, it is not necessary to agree with or acknowledge the validity of each other's values, but it is necessary to document the range of values identified.

Social or cultural values can only be identified through consultation with Aboriginal people. This could involve a range of methodologies, such as cultural mapping, oral histories, archival documentation and specific information provided by Aboriginal people specifically for the investigation.

When recording oral history:

- Identify who was interviewed and why.
- Document the time, place and date the interview was conducted.
- Describe the interview arrangements (the number of people present, recording arrangements, information access arrangements).
- Provide a summary of the information provided to the person being interviewed.
- Summarise the information provided by each person interviewed.

More information on conducting oral history projects can be found in OEH's publication Talking history: oral history guidelines.

Occasionally information about social value may not be forthcoming. In these circumstances, document the consultation process but make it clear in the discussions and conclusions about social value that this was the case.

#### **5.2.2. Historic Value**

Historic value refers to the associations of a place with a historically important person, event, phase or activity in an Aboriginal community. Historic places do not always have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional

historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain a sufficient understanding of historic values.

### 5.2.3. Scientific (Archaeological) Value

This refers to the importance of a landscape, area, place or object because of its rarity, representativeness and the extent to which it may contribute to further understanding and information (Australian ICOMOS 1988).

Information about scientific values will be gathered through any archaeological investigation undertaken. Archaeological investigations must be carried out according to OEH's Code of practice for archaeological investigation of Aboriginal objects in NSW.

Scientific significance, also referred to as archaeological significance, is determined by assessing an Aboriginal heritage site or area according to archaeological criteria. The assessment of archaeological significance is used to develop appropriate heritage management and impact mitigation strategies.

Criteria for archaeological significance have been developed in accordance with DPIE guidelines, as shown in Table 16 below.

Table 16 – Scientific (Archaeological) Value

Significance Criteria	Description
Research Potential	Does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
Representativeness	How much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?
Rarity	Is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
Education Potential	Does the subject area contain teaching sites or sites that might have teaching potential?
Condition	What is the condition of the site? Does it appear to have been impacted/alterd?

### 5.2.4. Aesthetic Value

This refers to sensory, scenic, architectural, and creative aspects of the place. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Australian ICOMOS 1988).

## 5.3. IDENTIFYING VALUES

The information collected in the background review of the project can be used to help identify these values. The review of background information and information gained through consultation with Aboriginal people should provide insight into past events. These include how the landscape was used and why any identified Aboriginal objects are in this location, along with contemporary uses of the land.

Information gaps are not uncommon and should be acknowledged. They may require further investigation to adequately identify the values present across the subject area. It may be helpful to prepare a preliminary values map that identifies, to the extent of information available, the:

- Known places of social, spiritual, cultural value, including natural resources of significance.
- Known historic places.

- Known Aboriginal objects and/or declared Aboriginal places.
- Potential places/areas of social, spiritual, cultural value, including natural resources, historic or archaeological significance.
- Places of potential value that are not fully identified or defined should be included as 'sensitive' areas to target further investigation.

## 5.4. ASSESSING VALUES AND SIGNIFICANCE

This stage is used to assess and discuss the cultural significance of the values identified during the identification and assessment of cultural significance by consulting Aboriginal people and to prepare a statement of significance. The assessment of values is a discussion of what is significant and why. An assessment of values is more than simply restating the evidence collected during the background review and identification of values stages of the project. Rather, the assessment should lead to a statement of significance that sets out a succinct summary of the salient values that have been identified.

The assessment and justification in the statement of significance must discuss whether any value meets the following criteria (NSW Heritage Office 2001):

- Does the subject area have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons? – social value.
- Is the subject area important to the cultural or natural history of the local area and/or region and/or state? – historic value.
- Does the subject area have potential to yield information that will contribute to an understanding of the cultural or natural history of the local area and/or region and/or state? – scientific (archaeological) value.
- Is the subject area important in demonstrating aesthetic characteristics in the local area and/or region and/or state? – aesthetic value.
- Assessment of each of the criteria (above) should be graded in terms that allow the significance to be described and compared; for example, as high, moderate, or low. In applying these criteria, consideration should be given to:
- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
- Representativeness: how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?
- Rarity: is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential: does the subject area contain teaching sites or sites that might have teaching potential?

Then discuss what is significance and why – this should be summarised into a statement of significance. Thus, the statement of significance is a succinct summary of the salient values drawn from the identification of values.

### 5.4.1. Assessment of Cultural Heritage Significance and Values

An assessment of cultural heritage significance and values incorporates a range of values which may vary for different individual groups and may relate to both the natural and cultural characteristics of places or sites. Cultural significance and Aboriginal cultural views can only be determined by the Aboriginal community using their own knowledge of the area and any sites present, and their own value system. All Aboriginal heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape.

Consultation with members of the local Aboriginal community (project RAPs) was undertaken to identify the level of spiritual/cultural significance of the subject area and its components. In acknowledgment that the Aboriginal community themselves are in the best position to identify levels of cultural significance, the project RAPs were invited to provide comment and input into this ACHAR and to the assessment of cultural heritage significance and values presented therein.

Through the consultation for this project that there is a strong belief by many RAPs that the bigger cultural and archaeological picture is being missed when project focus is only given to a small subject area/portion of the wider landscape. Only through excavating in areas that may appear to be highly disturbed can we accurately determine the level of historical impact.

#### **5.4.2. Assessment of Scientific (Archaeological) Significance**

In accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, and in consultation with representatives of the local Aboriginal community, the following assessment of the scientific (archaeological) significance of identified sites within the subject area has been prepared.

This assessment has determined that Aboriginal sites have previously tended to be identified adjacent to permanent water. Geotechnical investigation, site survey, analysis of historical aerials and utility schematics suggest that most of the subject area has been exposed to moderate to high levels of disturbance.

It is determined by this ACHAR that despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments in the vicinity of the subject area indicates that there is likely to be some remaining moderate to high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.

Following the precautionary principle, best practice and feedback received from RAPs during the consultation process for this assessment it is recommended that an archaeological monitoring program shall be undertaken to test the above assumptions.



## **6. IMPACT ASSESSMENT**

### **6.1. THE PROPOSED WORKS**

The proposal seeks the demolition of existing structures and landscaping across the subject site and construction of a two-storey warehouse facility. A two-storey car park would be constructed adjacent to Edinburgh Road and a two-storey hardstand loading and delivery area adjacent to Sydney Steel Road.

Bulk excavation works would be located within the northern and south-western components of the subject area in association with the flood storage area and OSD tanks. The precise depth of excavation works has not been provided, however, appears to be approximately 4.5 metres based on the Typical underground OSD and flood plain excavation extent section. Box culverts would be installed along the north-western boundary of the site and columns with pile caps across the majority of the subject area. Landscaping would also be undertaken along the north-eastern and south-eastern boundaries.

Geotechnical information from boreholes placed in the nearby Murray Street road easement and the Edgeware Road easement revealed a soil profile consisting of between 0.7–1.3 m of fill overlying a 0.6 m of thick silty clay alluvium layer, which overlies residual sediments to a depth of 7.5 m.

Aboriginal archaeological resources prior to or temporally associated with the early colonial occupation of the subject site, if present, would be located beneath imported fill associated with the early 20th century land reclamations. Any works which involve excavation at a depth greater than 0.7-1.3m may impact on deposits that may contain Aboriginal archaeological resources.

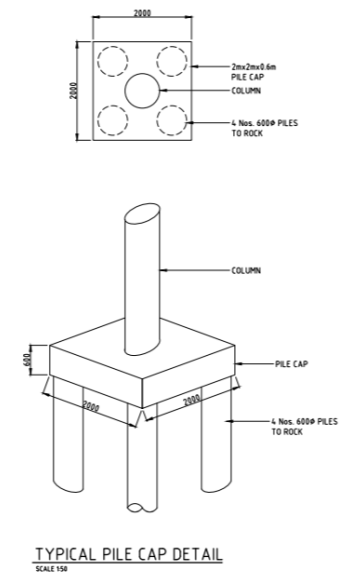
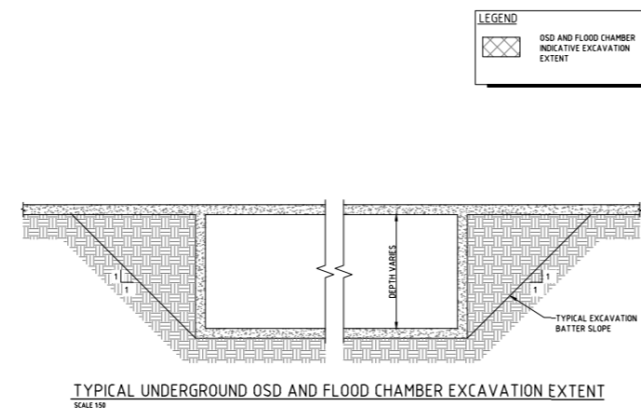
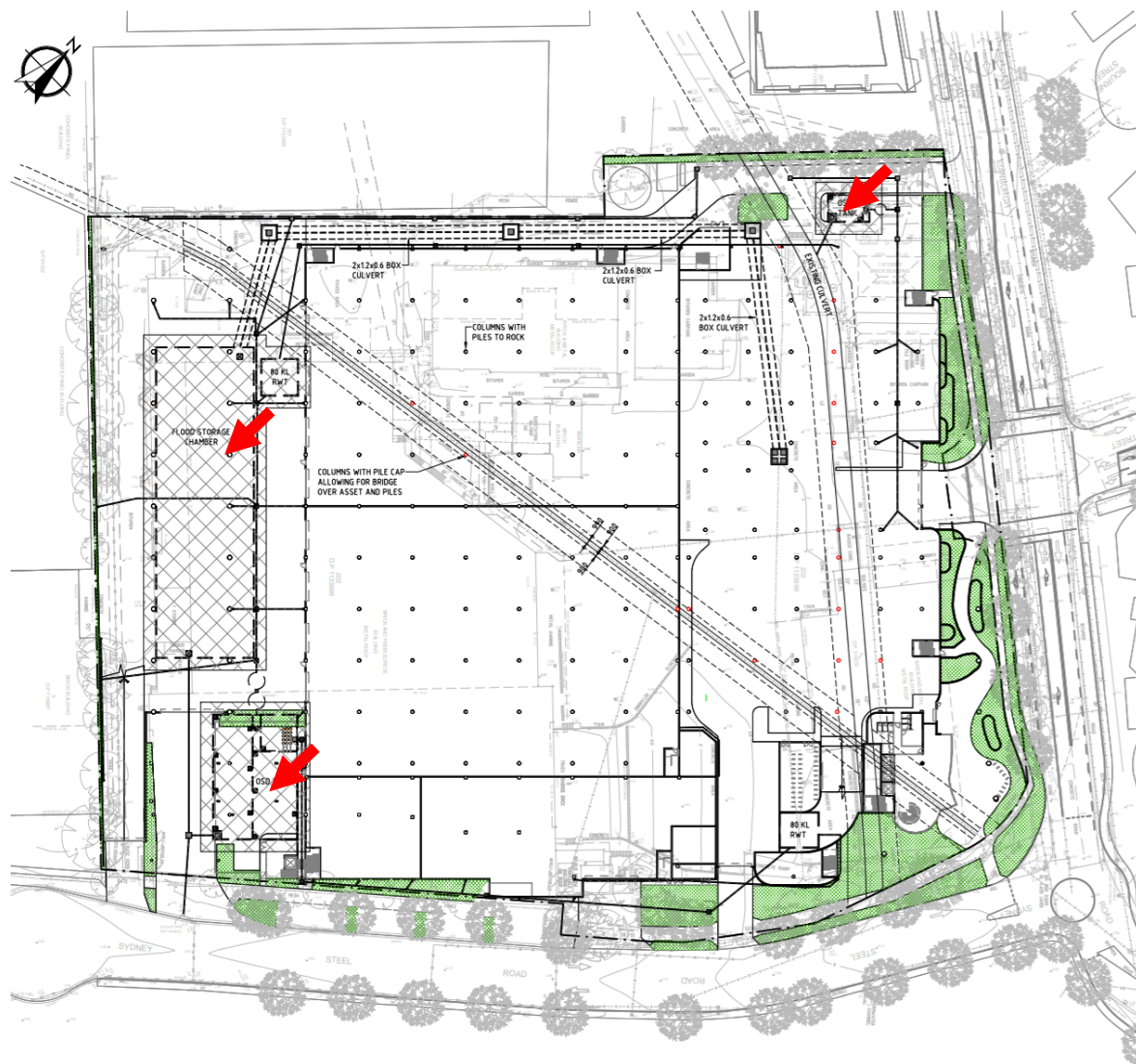


Figure 34 – Excavation extent plan. Note the proposed bulk excavation areas marked by the red arrows.

Source: Richmond + Ross, August 2020

## 6.2. POTENTIAL HARM

This section identifies the potential impacts to cultural heritage arising from the proposal, including demolition, excavation, and construction phases. Harm can be direct or indirect, defined by the Assessment Guidelines as:

- Direct harm – may occur as the result of any activity which disturbs the ground including, but not limited to, site preparation activities, installation of services and infrastructure, roadworks, excavation, flood mitigation measures.
- Indirect harm – may affect sites or features located immediately beyond or within the area of the proposed activity. Examples include, but are not limited to, increased impact on art in a shelter from increased visitation, destruction from increased erosion and changes in access to wild food resources.

The nature, extent and level of harm (indirect or direct) cannot be identified at this stage due to the lack of sufficient information on the presence or absence of Aboriginal objects and archaeological resources within the subject area. This ACHA has concluded that there is moderate to high archaeological potential for subsurface Aboriginal archaeological deposits. However, should Aboriginal archaeological resources found within the subject area, the proposed development will have direct impact on those resources and potentially remove the archaeological resource completely.

The level, nature and extent of potential harm cannot be ascertained until the results of archaeological monitoring are assessed.

## 6.3. LIKELY IMPACTED VALUES

The level of archaeological potential of subsurface Aboriginal objects and archaeological resources that may exist within the subject area can only be further assessed by archaeological investigation.

Potential Aboriginal objects and/or sites may represent various scale camping events and Aboriginal utilisation of the land in the form of hearths and/or stone artefacts.

## 6.4. CONSIDERATION OF INTER-GENERATIONAL EQUITY

### 6.4.1. Cumulative Impact Assessment

The principle of inter-generational equity (IGE) holds that the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations.

Cumulative impact of any development on Aboriginal sites assesses the extent of the proposed impact on the site and how this will affect both the proportion of this type of Aboriginal site in the area and the impact this destruction will have on Aboriginal cultural heritage values generally in the area. For example, if an artefact scatter is destroyed in the course of a proposed development, how many artefact scatters are likely to remain in that area and how will the destruction of that site affect the overall archaeological evidence remaining in that area? If a site type that was once common in an area becomes rare, the loss of that site (and site type) will affect our ability to understand past Aboriginal land uses, will result in an incomplete archaeological record and will negatively affect intergenerational equity.

As the ACHA identified that further investigation is needed in the form of archaeological monitoring, the principles of the IGE can only be partially assessed at this stage and further information will be provided following the investigation.

This assessment has established that the current subject area does not contain any previously identified Aboriginal sites.

It has been determined by this ACHAR that the subject area contains moderate to high archaeological potential for subsurface Aboriginal archaeological deposits with moderate associated scientific significance.

Following the execution of the further archaeological investigation recommendations made by this ACHAR the appropriate CIA can be completed.

## 7. AVOIDING AND MINIMISING HARM

The nature, extent and level of harm (indirect or direct) cannot be identified at this stage due to the lack of sufficient information on the presence or absence of subsurface archaeological resources within the subject area. The ACHA concluded that there is moderate to high potential for subsurface Aboriginal objects and archaeological resources within the underlying soil landscape and recommends additional investigation in the form of archaeological excavation. This excavation is to establish the presence/absence and extent of subsurface archaeological resources that may be present within the subject area.

The nature and complexity of mitigation measures to avoid and/or minimise harm to any Aboriginal objects and archaeological resources that might be identified will be provided in context of the nature, extent and significance of those any resources uncovered during the proposed monitoring program.

Subsurface archaeological investigation is not possible prior to approval of the SSDA, hence the recommendations for further investigation following the removal of the slab/hardstand.



## 8. CONCLUSIONS

The Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared in accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) and submitted to support of the State Significant Development Application (SSDA - 10468).

The ACHAR was prepared as per the relevant section of the *National Parks and Wildlife Act 1974* (NPW Act) and the *National Parks and Wildlife Regulations 2009* (NPW Reg) and in accordance with the following guidelines:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010).
- The Burra Charter, 2013 (Burra Charter).

The ACHAR concluded that:

- There are no registered Aboriginal objects and/or archaeological sites within the subject area.
- The original landscape is covered by between 0.7–1.3 m of imported fill and the ground surface visibility within the subject area is considered zero.
- There are landscape features with potential for Aboriginal objects or archaeological deposits located within the subject area.
- Despite an extensive built environment and drainage modification, the deep nature of the residual underlying sediments indicates that there is likely to be some remaining archaeological potential at the site. This report concludes that there is moderate-high archaeological potential for Aboriginal objects in sub-surface contexts where there have not been extensive sub-surface impacts.
- Additional investigation is considered warranted in the form archaeological monitoring to establish the presence or absence of Aboriginal objects and archaeological resources within the subject area.
- No additional Aboriginal cultural heritage values have been identified by the RAPs.
- The RAPs have expressed their support for the proposed recommendations and additional works.

## 9. RECOMMENDATIONS

Based on the conclusions of this assessment the proposed activity can proceed under the following recommendations:

### **Recommendation 1 – Continued RAP Consultation**

The Proponent should continue to consult with the Aboriginal community regarding the project.

### **Recommendation 2 – Further Archaeological Investigation**

#### *Development of Archaeological Research Design (ARD) and Monitoring/Excavation Methodology (MEM)*

Prior to construction subsurface archaeological investigation must be carried out, informed by an Archaeological Research Design (ARD) and Monitoring/Excavation Methodology (MEM), to investigate the identified landscape features and their potential for retaining Aboriginal objects and archaeological resources.

#### *Archaeological Monitoring*

Following the approval of the SSDA and parallel with the commencement of earthworks, during the removal of the existing slab and areas of proposed bulk excavation archaeological monitoring should be undertaken to ensure no potential Aboriginal archaeological deposits are harmed during the works.

The objectives of the archaeological monitoring are the following:

- To confirm the presence or absence of Aboriginal objects and archaeological resources at the selected bulk excavation works within the subject area.
- If present, investigate the nature, spatial and stratigraphical extent and integrity of the archaeological resource.
- Include RAPs in the investigation and gathering of information on any archaeological resources identified through the archaeological excavation.
- Ensure that the development can proceed with minimal risk of harming Aboriginal objects and to ensure the development of a nuanced Chance Find.

### **Recommendation 3 – Archaeological Chance Find Procedure**

In areas identified as having low potential for archaeological resources and for the construction of pylons, although considered highly unlikely, should any archaeological deposits be uncovered during any site works, a chance find procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without following the steps below.
2. Site supervisor, or another nominated site representative must contact either the project archaeologist (if relevant) or DPC to contact a suitably qualified archaeologist.
3. The nominated archaeologist examines the find, provides a preliminary assessment of significance, records the item and decides on appropriate management.
4. Depending on the significance of the find, reassessment of the archaeological potential of the subject area and further archaeological investigation may be required in the form of test or salvage excavation.
5. Works in the vicinity of the find can only recommence upon relevant approvals from DPC.

### **Recommendation 4 – Human Remains Procedure**

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.

4. Management recommendations are to be formulated by the Police, DPC and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

# APPENDIX A    **AHIMS EXTENSIVE SEARCH RESULTS**

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 11 August 2020

Level 8 123 Angel Street  
Sydney New South Wales 2000

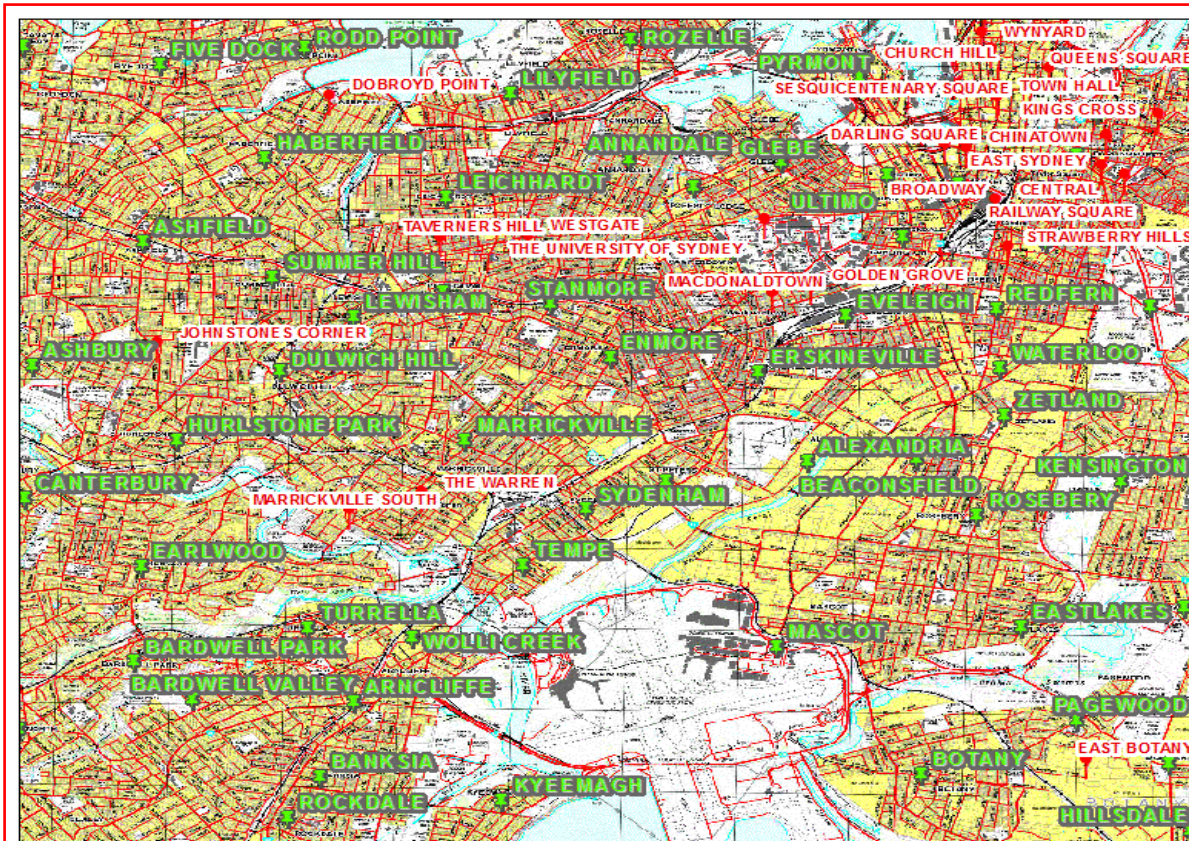
Attention: Aaron Olsen

Email: aolsen@urbis.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters, conducted by Aaron Olsen on 11 August 2020.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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

70	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 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.



# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2838	420 George Street PAD	AGD	56	334080	6250670	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Doctor.Tim Owen					<b>Permits</b>	2654	
45-6-2960	Jackson Landing Shelter	GDA	56	332442	6250870	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Mary Dallas Consulting Archaeologists (MDCA),Mr.Paul Irish					<b>Permits</b>		
45-6-2979	UTS PAD 1 14-28 Ultimo Rd Syd	GDA	56	333650	6249590	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting,Mr.Dominic Steele					<b>Permits</b>	3458	
45-6-3704	Tay Reserve Artefact	GDA	56	335723	6247268	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Mr.Michael Lever					<b>Permits</b>		
45-6-3705	Kent and Erskine St PAD	GDA	56	333876	6251145	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Ms.Jodi Cameron					<b>Permits</b>		
45-6-3693	Callan Park Scared Tree	GDA	56	330004	6251406	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3694	Callan Park Waterhole	GDA	56	330060	6251377	Open site	Valid	Water Hole : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3695	Callan Park Grinding Groove (possible)	GDA	56	330080	6251407	Open site	Valid	Grinding Groove : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3696	Callan Park Cultural Tree	GDA	56	330061	6251398	Open site	Valid	Aboriginal Resource and Gathering : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3697	SR-OVRH-1	GDA	56	326178	6243095	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					<b>Permits</b>		
45-6-3698	WC-OVRH-1	GDA	56	325918	6243345	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					<b>Permits</b>		

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3699	WC-OVRH-2	GDA	56	326969	6244040	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-3700	WC-OVRH-4	GDA	56	327571	6244109	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-3701	WC-OVRH-3	GDA	56	327472	6244023	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-0262	Rodd Point;Rodd Park;	AGD	56	328700	6251000	Open site	Valid	Shell : -, Artefact : -	Midden	2047
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							
45-6-2547	Nanny Goat Hill 1;NGH 1;	AGD	56	328700	6244300	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0615	Undercliffe Road	AGD	56	328500	6244500	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Midden,Shelter with Art	99514
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers,D Burns							
45-6-1481	Rozelle Hospital 3	AGD	56	329902	6251129	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							
45-6-0629	Buoy;Botany Shell Midden;	AGD	56	334300	6241400	Closed site	Valid	Artefact : -, Shell : -, Burial : -	Burial/s,Midden,Sh elter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS							
45-6-2142	Hen & Chicken Bay, Five Dock,;	AGD	56	326200	6251250	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin							
45-6-2414	Wolli_Creek 1.6;	AGD	56	326280	6243580	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2415	Wolli_Creek 1.4;	AGD	56	325740	6243270	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2564	Wolli Creek 2.5	AGD	56	327250	6243760	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2565	Wolli Creek 2.4	AGD	56	327010	6243900	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College							

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2566	Wolli Creek 2.1	AGD	56	326960	6243880	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2567	Wolli Creek	AGD	56	327250	6243760	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2568	Wolli Creek	AGD	56	327010	6244000	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2580	Junction Lane	AGD	56	335070	6250410	Open site	Valid	Artefact : -	Open Camp Site	102494,102763,102765
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw					<u>Permits</u>	894,902,903	
45-6-2581	Angel Place	GDA	56	334223	6251138	Open site	Valid	Artefact : -	Open Camp Site	97963,102494,102763,102765
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	918	
45-6-2416	Wolli_Creek 1.3;	AGD	56	325840	6243370	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2417	Wolli_Creek 1.2;	AGD	56	325880	6243400	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2418	Wolli_Creek 1.1;	AGD	56	325880	6243400	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2198	View Street	AGD	56	329500	6244350	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Michael Guider					<u>Permits</u>	1330,1331	
45-6-1936	Rodd Point Cave;	AGD	56	328730	6251010	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-0751	Shea's Creek Dugong	GDA	56	331839	6245378	Open site	Destroyed	Artefact : -, Aboriginal Resource and Gathering : -, Non-Human Bone and Organic Material : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS,AECOM Australia Pty Ltd - Sydney,Mr.Luke Kirkwood					<u>Permits</u>		
45-6-1496	Shea's Creek	AGD	56	331697	6245597	Open site	Not a Site	Shell : -, Artefact : -	Midden	30,591,940
	<u>Contact</u>	<u>Recorders</u>	ASRSYS					<u>Permits</u>		

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2652	Ultimo PAD 1	GDA	56	333419	6249969	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Jim Wheeler,Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic							<b>Permits</b> 1598
45-6-2654	Fraser Park PAD	AGD	56	330100	6245800	Open site	Valid	Potential Archaeological Deposit (PAD) : -		98669,104256, 104257
	<b>Contact</b>	<b>Recorders</b>	Navin Officer Heritage Consultants Pty Ltd							<b>Permits</b> 1639
45-6-2687	Crown Street PAD 1	AGD	56	334950	6250300	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting							<b>Permits</b> 2017
45-6-2745	University of Sydney Law Building PAD	AGD	56	332350	6248740	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102201,10249 4,102763,1027 65
	<b>Contact</b>	<b>Recorders</b>	Doctor.Jo McDonald							<b>Permits</b> 2153,2320,2443
45-6-3071	445-473 Wattle Street PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<b>Contact</b>	<b>Recorders</b>	Biosis Pty Ltd - Sydney							<b>Permits</b>
45-6-2987	Poultry Market 1	GDA	56	333746	6249575	Open site	Valid	Artefact : 1		102494,10276 3
	<b>Contact</b>	<b>Recorders</b>	Ms.Samantha Higgs,Biosis Pty Ltd - Canberra							<b>Permits</b> 3506
45-6-3064	445-473 WATTLE ST PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102763
	<b>Contact</b>	<b>Recorders</b>	Biosis Pty Ltd - Sydney							<b>Permits</b>
45-6-3155	Moore Park AS1	GDA	56	335613	6247909	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<b>Permits</b> 4019
45-6-3552	Smith Hogan and Spindlers Park Midden	GDA	56	331309	6249791	Open site	Not a Site	Shell : -, Burial : -		104371
	<b>Contact</b>	<b>Recorders</b>	Mr.Mark Simon							<b>Permits</b>
45-6-3654	CRS AS 01 (Central Railway Station Artefact scatter 01)	GDA	56	334055	6249146	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							<b>Permits</b>
45-6-2629	Broadway 1	AGD	56	333060	6249100	Open site	Valid	Artefact : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting							<b>Permits</b> 1299
45-6-2637	George street 1	AGD	56	333860	6249880	Open site	Valid	Artefact : -		98238,102494, 102763,10276 5

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	1369	
45-6-2783	PAD Central Royal Botanic Gardens	AGD	56	334900	6251030	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Haglund and Associates					<u>Permits</u>	2364	
45-6-2767	Tent Embassy	AGD	56	332680	6248680	Open site	Valid	Aboriginal Resource and Gathering : 1		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Bill Lord					<u>Permits</u>		
45-6-2796	320-328 George St PAD	AGD	56	334100	6251050	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Mr.Dominic Steele					<u>Permits</u>	2415	
45-6-2822	USYD: Central	AGD	56	332750	6248550	Open site	Valid	Artefact : -		100302,10249 4,102763,1027 65
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML					<u>Permits</u>	2554	
45-6-3152	168-190 Day Street, Sydney PAD	GDA	56	333877	6250257	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Josh Symons,Mr.Alex Timms					<u>Permits</u>	3789	
45-6-3116	Wynyard Walk PAD	GDA	56	333931	6251252	Open site	Destroyed	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	GML Heritage Pty Ltd + Context - Surry Hills,GML Heritage Pty Ltd + Context - Surry					<u>Permits</u>	3670	
45-6-3217	Darling Central Midden	GDA	56	333530	6250101	Open site	Valid	Aboriginal Ceremony and Dreaming : 1, Artefact : 1, Shell : 1		
	<u>Contact</u>	<u>Recorders</u>	Comber Consultants Pty Limited,Ms.Tory Stening					<u>Permits</u>		
45-6-3322	Timbrell Park Midden	GDA	56	327989	6250589	Open site	Valid	Shell : -		
	<u>Contact</u>	<u>Recorders</u>	DPIE,Ms.Sam Higgs					<u>Permits</u>		
45-6-3324	RBG PAD 1	GDA	56	334802	6251224	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	AMAC Group P/L,Mr.Benjamin Streat					<u>Permits</u>		
45-6-3338	The Bays Precinct PAD02	GDA	56	332354	6250885	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Mr.Michael Lever					<u>Permits</u>		

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-6-3339	The Bays Precinct PAD01	GDA	56	332779	6250555	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma <u>Permits</u>							

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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## APPENDIX B    **GEOTECHNICAL REPORTS**



## ENVIRONMENTAL INVESTIGATION SERVICES

3 February 2015

Ref: E28042KBlet

Masters Home Improvement

Attention: Mr Paul Teasdale

### **ACID SULFATE SOIL ASSESSMENT AND MANAGEMENT PLAN**

### **PROPOSED MASTERS DEVELOPMENT**

### **CNR EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW**

## **1 INTRODUCTION**

Masters Home Improvement ('the client') commissioned Environmental Investigation Services (EIS)<sup>1</sup> to undertake an acid sulfate soil (ASS) assessment and prepare an ASS management plan (ASSMP) for the proposed Masters development at the corner of Edinburgh Road and Sydney Steel Road, Marrickville, NSW.

The site is identified as 74 Edinburgh Road (Lot 202 in DP1133999). The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2.

The investigation was undertaken generally in accordance with a JK proposal (Ref: P39749ZA Rev) of 17 December 2014 and written acceptance from the client by email of 24 December 2014.

This report describes the investigation procedures and presents the results of the ASS assessment, together with comments, discussion and recommendations.

A geotechnical investigation was undertaken in conjunction with the ASS assessment by JK Geotechnics<sup>2</sup> and the results are presented in a separate report (Ref. 28042ZArpt, dated February 2015). This letter should be read in conjunction with the JK report.

### **1.1 Proposed Development Details**

The proposed development includes the demolition of the existing buildings and construction of a two level commercial building, with car parking provided at ground floor level. On-grade car parking will also be provided between the proposed new building and Edinburgh Road. At the south-eastern end of the site, nine factory units are also proposed. Each factory unit will contain a mezzanine office level. Minor excavation is anticipated for the installation of foundations and services.

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<sup>1</sup> Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

<sup>2</sup> Geotechnical consulting division of J&K



## **2        INFORMATION ON ACID SULFATE SOILS**

### **2.1        Background**

ASS is formed from iron rich alluvial sediments and sulfate (found in seawater) in the presence of sulfate reducing bacteria and plentiful organic matter. These conditions are generally found in mangroves, salt marsh vegetation or tidal areas and at the bottom of coastal rivers and lakes. These soils include those that are producing acid (termed actual ASS) and those that can become acid producing (termed potential ASS or 'PASS'). PASS are naturally occurring soils and sediment that contains iron sulfides (pyrite) which, when exposed to oxygen generate sulfuric acid.

### **2.2        The ASS Management Advisory Committee (ASSMAC)**

The NSW government in 1994 formed the ASSMAC to coordinate a response to ASS issues. In 1998 this group released the Acid Sulfate Soil Manual<sup>3</sup> providing best practice advice for planning, assessment, management, laboratory methods, drainage, groundwater and the preparation of ASS management plans (ASSMP).

In 1997 the Department of Land and Soil Conservation (now part of the Office of Environment and Heritage<sup>4</sup>) developed two series of maps with respect to ASS for use by council and technical staff implementing the ASS Manual 1998:

- ASS Planning Maps – issued to councils and government units; and
- ASS Risk Maps – issued to interested parties.

### **2.3        The ASS Planning Maps**

The ASS planning maps provide an indication of the relative potential for disturbance of ASS to occur at locations within the council area. These maps do not provide an indication of the actual occurrence of ASS at a site or the likely severity of the conditions.

The maps are divided into five classes dependent upon the type of activities/works that if undertaken, may represent an environmental risk through the development of acidic conditions associated with ASS:

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<sup>3</sup> *Acid Sulfate Soils Manual*, Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998 (ASS Manual)

<sup>4</sup> <http://www.environment.nsw.gov.au/acidsulfatesoil/index.htm>

Table 2-1: Risk Classes

Risk Class	Description
Class 1	All works.
Class 2	All works below existing ground level and works by which the water table is likely to be lowered.
Class 3	Works at depths beyond 1m below existing ground level or works by which the water table is likely to be lowered beyond 1m below existing ground level.
Class 4	Works at depths beyond 2m below existing ground level or works by which the water table is likely to be lowered beyond 2m below existing ground level.
Class 5	Works within 500m of adjacent Class 1,2,3,4 land which are likely to lower the water table below 1m AHD on the adjacent land.

## 2.4 The ASS Risk Maps

The ASS risk maps provide an indication of the probability of occurrence of PASS at a particular location based on interpretation from geological and soil landscape maps. The maps provide classes based on high probability, low probability, no known occurrence and areas of disturbed terrain (site specific assessment necessary) and the likely depth at which ASS are likely to be encountered.

## 2.5 Investigation and Laboratory Testing for ASS

The ASS Manual 1998 includes information on assessment of the likelihood of PASS, the need for an ASSMP, and the development of mitigation measures for a proposed development located in PASS risk areas.

The ASS Manual recommends a minimum of 4 sampling locations for a site with an area up to 1ha. For sites greater than 4ha, the manual recommends the use of a reduced density of 2 locations per hectare subject to the proposed development. For lineal investigations, the manual recommends sampling every 50-100m.

The sampling locations should include all areas where significant disturbance of soils will occur and/or areas with a high environmental sensitivity. In some instances a varied sampling plan may be more suitable, particularly for sites less than 1,000m<sup>2</sup> in area.

The depth of investigation should extend to at least 1m beyond the depth of proposed excavation/disturbance or estimated drop in water table height, or to a minimum of 2m below existing ground level, whichever is greatest.

Standard methods for the laboratory analysis of samples are presented in the Australian Standard AS4969-2008/09<sup>5</sup> (part 1 to 14). The principal analytical method is suspension Peroxide Oxidation Combined Acidity and Sulfur (sPOCAS).

The sPOCAS method specified in AS4969-2008/09 supersedes the POCAS method specified in the ASS Manual 1998. When  $S_{POS}$  (peroxide oxidisable sulfur) values are close to the action criteria confirmation of the result can be undertaken by the chromium reducible sulfur ( $S_{CR}$ ) method.

The endpoint for the pH titration in AS4969-2008/09 is pH6.5 as opposed to pH5.5 adopted in the ASS Manual. Therefore the values for Total Actual Acidity (TAA), Total Sulfide Acidity (TSA) and Total Potential Acidity (TPA) will more conservative when analysed using the sPOCAS method specified in AS4969-2008/09.

### **3**      **SITE INFORMATION**

#### **3.1**      **Site Description**

The site is located in a predominantly industrial area of Marrickville and is bounded by Edinburgh Road to the north and east, Sydney Steel Road to the south and by a vacant property to the west. The Marrickville Metro Shopping Centre is located further to the north of Edinburgh Road. The site is located at the toe of a south facing hillside and is almost flat.

At the time of the investigation, a large concrete panel warehouse and office building occupied the southern portion of the site. A concrete block and metal clad warehouse was located in the eastern portion of the site and a metal clad warehouse was located near the middle of the north-western boundary. A two storey brick office building and a small security shed/office were located at the main driveway entrance in the northern corner.

Areas between the site buildings were generally paved with concrete, interlocking pavers, and asphaltic concrete. Retaining walls up to approximately 1.8m high were located either side of the main loading dock (near the middle of the south-eastern boundary).

A drainage easement was located in the north section of the site which generally ran from east to north-west through the site.

#### **3.2**      **Regional Geology**

The geological map of Sydney (1983<sup>6</sup>) indicates the site to be located on the boundary of Hawkesbury Sandstone and silty to peaty quartz sand, silt and clay. Hawkesbury Sandstone typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

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<sup>5</sup> *Analysis of acid sulfate soil – Dried samples – Methods of test, Parts 1 to 14*, Standards Australia, 2008/2009 (AS4969-2008/09)

<sup>6</sup> *1:100,000 Geological Map of Sydney (Series 9130)*, Department of Mineral Resources (1983)



Reference should be made to the JK report for further details regarding the site specific sub-surface conditions.

### **3.3 Marrickville Council Local Environmental Plan (LEP) 2011**

A review of the Marrickville council LEP indicates that the site is located in a Class 2 ASS risk area.

### **3.4 Acid Sulfate Soil (ASS) Risk Map**

A review of the ASS risk maps prepared by Department of Land and Water Conservation (1997<sup>7</sup>) indicates that the site is located in an area classed as 'disturbed terrain'.

The 'disturbed terrain' classification is adopted in large scale filled areas which often occur during reclamation of low lying swamps for urban development, in areas which may have been mined or dredged or have undergone heavy ground disturbance through general urban development or the construction of dams and levees. The majority of landforms within these areas are not expected to encounter PASS. However, localised occurrences may be found at depth. Disturbance of these materials will result in a risk that will vary with elevation and depth of disturbance. Soil investigation is required to assess these areas for PASS.

## **4 ASSESSMENT CRITERIA**

The ASS Manual present 'action criteria' for the interpretation of laboratory results. The 'action criteria' define the need to prepare a management plan and are based on the percentage of oxidisable sulfur (or equivalent Total Potential Acidity [TPA]) for broad categories of soil types. Where disturbance of greater than 1,000 tonnes of ASS is proposed, the action criteria for 'coarse textured soils' apply to all soil types.

### **4.1 Action Criteria**

The following action criteria are presented in the ASS Manual:

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<sup>7</sup> Department of Land and Water Conservation, (1997), *1:25,000 Acid Sulfate Soil Risk Map (Series 9130S3, Ed 2)*.

Table 4-1: ASS Action Criteria

Category	Description	Criteria
Coarse Textured Soils	Sands to loamy sands	<ul style="list-style-type: none"> <li>pH - less than 5;</li> <li>Total Actual Acidity (TAA)/Total Sulfide Acidity (TSA)/ Total Potential Acidity (TPA) (pH5.5) – greater than 18mol H<sup>+</sup>/tonne; and</li> <li>S<sub>pos</sub> – greater than 0.03% sulfur oxidisable.</li> </ul>
Medium Textured Soils	Sandy loams to light clays	<ul style="list-style-type: none"> <li>pH - less than 5;</li> <li>TAA/TSA/TPA (pH5.5) – greater than 36mol H<sup>+</sup>/tonne; and</li> <li>S<sub>pos</sub> – greater than 0.06% sulfur oxidisable.</li> </ul>
Fine Textured Soils	Medium to heavy clays and silty clays	<ul style="list-style-type: none"> <li>pH - less than 5;</li> <li>TAA/TSA/TPA (pH5.5) – greater than 62mol H<sup>+</sup>/tonne; and</li> <li>S<sub>pos</sub> – greater than 0.1% sulfur oxidisable.</li> </ul>

## 4.2 Site Specific Action Criteria

The action criteria for fine textured soils have been adopted for this assessment. This is based on the predominant soil type encountered at the sampling locations (i.e. silty clay).

# 5 INVESTIGATION PROCEDURE

## 5.1 Subsurface Investigation and Soil Sampling Methods

Field work for this investigation was undertaken on 5, 7 and 9 January 2015. Soil samples were obtained from 5 boreholes (BH1, BH4, BH7, BH9 and BH11) drilled for the JK geotechnical investigation. The sampling locations are shown on the attached Figure 2.

The sample locations were drilled using a truck mounted hydraulically operated drill rig equipped with spiral flight augers. Soil samples were obtained from a Standard Penetration Test (SPT) sampler or directly from the auger when conditions did not allow use of the SPT sampler.

Soil samples were obtained at various depths, based on observations made during the field investigation. All samples were placed in plastic bags and sealed with plastic ties with minimal headspace. Each sample was labelled with a unique job number, the sampling location, sampling depth and date. All samples were recorded on the borehole logs attached in the appendices.

The samples were preserved by immediate storage in an insulated sample container with ice. On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures. Additional samples were frozen and stored pending further analysis.

## 5.2 Laboratory Analysis

Ten selected natural soil samples obtained from the site were analysed for PASS using the sPOCAS analytical methods detailed in AS4969-2008/09. The laboratory testing was undertaken by Envirolab Services (NATA Accreditation Number – 2901). Reference should be made to the laboratory report (Ref: 121960) attached in the appendices for further information.

## 6 RESULTS OF THE INVESTIGATION

### 6.1 Subsurface Conditions

The subsurface conditions encountered in the boreholes generally consisted of concrete or asphaltic concrete (AC) pavement to a maximum depth of 0.17m below ground level (bgl), underlain by fill material to depths of approximately 1.7mbgl to >6mbgl, and underlain by natural silty clay soil to a depth of approximately 9.2mbgl. Shale bedrock was encountered beneath the silty clay in selected boreholes. The fill material typically consisted of sandy gravel, silty clay or gravelly silty sand. Groundwater seepage was encountered during drilling at depths of approximately 6mbgl to 8.8mbgl. Standing water level (SWL) was measured in the selected boreholes at depths of 2.5mbgl to 8.8mbgl on completion of drilling. The Reference should be made to the borehole logs attached in the appendices for further details.

### 6.2 Laboratory Results

The soil laboratory results were assessed against the guidelines adopted for the investigation. The results are presented in the attached report tables and summarised below.

Table 6-1: Summary of ASS Results

Analyte	Results Compared to ASS Guidelines
pH <sub>KCl</sub> and pH <sub>ox</sub>	<p>The pH<sub>KCl</sub> results ranged from 3.9 to 8.4. The results indicate that prior to oxidation the pH values of the soil suspended in potassium chloride solution ranged from strongly acidic to alkaline.</p> <p>Following oxidation, the pH<sub>ox</sub> results for the samples ranged from 4 to 7.8. These results are generally strongly acidic to neutral. The pH of the samples typically dropped by 2 or more units following oxidation.</p>
Acid Trail	<ul style="list-style-type: none"> <li>TAA results ranged from less than the PQL (LPQL) to 87mol H<sup>+</sup>/tonne. One result was above the action criteria of 62mol H<sup>+</sup>/tonne;</li> <li>TPA results ranged from LPQL to 70mol H<sup>+</sup>/tonne. One result was above the action criteria of 62mol H<sup>+</sup>/tonne; and</li> <li>TSA results ranged from LPQL to 27mol H<sup>+</sup>/tonne. All of the results were below the action criteria of 62mol H<sup>+</sup>/tonne.</li> </ul>

Analyte	Results Compared to ASS Guidelines
Sulfur Trail	The $S_{pos}\%$ results ranged for 0.005% to 0.15%. The majority of the results were below the action criterion of 0.1% as shown on Table A. One natural soil sample BH11 (3-3.45m) encountered an elevated $S_{pos}\%$ result of 0.15% which was above the action criterion.
Liming Rate	The liming rate required for neutralisation ranged from 1kgCaCO <sub>3</sub> /tonne to 7.7 kgCaCO <sub>3</sub> /tonne.

## 7 **CONCLUSION**

The soil samples analysed for this investigation encountered results which were above the action criteria adopted for the assessment.

Based on these results, the risk of generating ASS conditions following disturbance of the natural soils for the proposed development at the site is considered to be high.

An ASSMP is required for the proposed development. A site specific management plan is outlined in the section below.

## 8 ACID SULFATE SOIL MANAGEMENT PLAN (ASSMP)

### 8.1 Introduction

The most effective management strategy for dealing with PASS is to avoid disturbing the material. If this is not a viable option then the ASSMP should be implemented.

The objective of the ASSMP is to reduce the potential on-site and off-site environmental impacts associated with disturbance of PASS identified at the site. The ASSMP has been prepared generally in accordance with the ASS Manual 1998. Reference has also been made to the Queensland Acid Sulfate Soil Technical Manual v 3.8<sup>8</sup>.

The following issues are addressed in the ASSMP:

- Strategies for the management of PASS during development;
- Implementation of a soil and groundwater monitoring program; and
- Contingency procedures to be implemented in the event of the failure of management strategies.

### 8.2 Management of PASS

The following options are available for the management and disposal of PASS:

Table 8-1: Management of PASS

Option	Details	Applicability for this Site
<u>Option A:</u> Disposal of PASS Beneath the Water Table at a Landfill	Immediate transport of natural PASS to landfill for disposal beneath the water table. A number of conditions have to be satisfied for burial beneath the water table to be viable. This option is not suitable for fill material or natural soil that has been impacted by contaminants.	May be a viable option for the natural soil provided the material is free of contamination. Not suitable for the disposal of fill.
<u>Option B:</u> Treatment of PASS, waste classification (WC) and disposal to a Landfill	PASS is excavated and neutralised with lime. A WC is assigned for the off-site disposal of the treated PASS to a landfill.	Considered the most viable option as the proposed development does not include bulk earthworks. A WC should be undertaken prior to disposal. This is described in detail in <b>Section 8.2.2.</b>

<sup>8</sup> Queensland Acid Sulfate Soil Technical Manual. Soil Management Guidelines version 3.8



Option	Details	Applicability for this Site
<u>Option C:</u> Treatment of PASS and on-site re-use.	PASS is excavated and neutralised with lime. The treated material is re-used on site with adequate capping. This option is not suitable for PASS that has been impacted by contaminants.	Considered the most cost effective option provided material can be used on site and provided the material is free of contamination.

### 8.2.1 Disposal of PASS Beneath the Water Table at a Landfill (Option A)

Natural soil classed as PASS may be disposed of below the water table at a landfill facility without lime treatment provided that the following conditions are met:

- The material is disposed below the water table within **24 hours** of excavation;
- The material meets the definition of 'virgin excavated natural material' (VENM) under the *Protection of the Environment Operations Act (1997)*<sup>9</sup>, even though it contains sulfidic ores;
- The receiving landfill is licensed by the NSW EPA to dispose of PASS below the water table; and
- The material meets the highly stringent pH criteria.

The procedures outlined in the following table should be implemented for this option:

Table 8-2: Management Procedure for Option A

Procedure	Details
<u>Step 1:</u> Contact Landfill	Prior to commencement of excavation works, the landfill should be contacted and the necessary approvals should be obtained for disposal.
<u>Step 2:</u> Excavation & Handling	Natural soil classed as PASS should be disturbed in stages.  PASS must be kept wet at all times during excavation and subsequent handling, transport and storage until they can be disposed of safely.
<u>Step 3:</u> pH testing	The pH of the soil should be checked using the test method(s) outlined in the ASS Manual 1998 (Methods 21A and or 21Af). The pH of each load and the time of extraction should be recorded and forwarded to the landfill. If the pH <b>is less than 5.5</b> then the material is not suitable for burial beneath the water and Option B should be implemented.

<sup>9</sup> *Protection of Environment Operations Act*, NSW Government, 1997 (POEO Act 1997)

Procedure	Details
<u>Step 4:</u> Transport	Provided that the pH of the excavated PASS is <b>not less than 5.5</b> the material can be loaded onto trucks and transported immediately to the landfill. Prior to burial the landfill will check the pH of each load. Any loads that do not meet the acceptance pH criteria will be turned away.

Some of the natural soils may have pH values less than 5.5 (see JK Report), making them unsuitable for this method of disposal. This will require a very rigorous monitoring regime to be implemented for this option. If successful only a fraction of the PASS may be found to be suitable for disposal by this method. Consequently the additional time and cost associated with this option may not be worthwhile.

### 8.2.2 Treatment, Waste Classification and Disposal to Landfill (Option B)

Potential acid generation is typically managed by the addition of lime to neutralise acid that may be generated during and after the excavation works. The treated material should then be assigned a waste classification (WC) in accordance with NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014<sup>10</sup>) and disposed of to a NSW EPA licensed landfill facility.

The procedures outlined in the following table should be implemented for this option:

Table 8-3: Management Procedure for Option B

Procedure	Details
<u>Step 1:</u> Lime selection	A slightly alkaline, low solubility product such as agricultural lime should be used. This form of lime is chemically stable and any excess lime takes a significant period of time (years) to influence soil pH beyond the depth of mixing. The lime particles eventually become coated with an insoluble layer of ferrihydrite ( $\text{Fe}[\text{OH}]_3$ ) that inhibits further reaction. Long term alteration of groundwater conditions is not expected to occur as a result of the use of lime during the proposed development works.

<sup>10</sup> NSW EPA, (2014), 'Waste Classification Guidelines, Part 1: Classifying Waste. (referred to as Waste Classification Guidelines 2014)

Procedure	Details
<p><u>Step 2:</u> Set up Treatment Area</p>	<p>A treatment area for the mixing of excavated soil with agricultural lime should be established. For treatment of large volumes of material, the treatment area must include a relatively impermeable surface for treatment or alternatively be covered with a pad of lime to act as a guard layer.</p> <p>The pad of lime should be at least 100mm thick and this thickness should be maintained for the duration of treatment works. The purpose of this guard layer is to minimise the risk of acidic water leaching from the base of the treatment area into the groundwater.</p> <p>Dependent upon the rate of spoil generation, several bunded treatment areas may be necessary for stockpiling and treatment. An earthworks strategy should be prepared to ensure that sufficient space is available on-site to accommodate treatment of the PASS.</p>
<p><u>Step 3:</u> Manage water run-off</p>	<p>The treatment area should be designed to retain any water run-off from the treated materials. This could comprise of: a compacted clay bund (constructed of non-PASS material); sandbags filled with a mixture lime and sand.</p> <p>All water should be diverted to a detention tank or constructed pond for assessment and treatment prior to disposal. Lime can be incorporated into artificial drainage lines and treatment ponds to aid in the neutralisation of any acidic run-off.</p> <p>The application of neutralising agents into natural water bodies or water courses should be avoided unless carefully planned and approved by council and relevant authorities.</p> <p>If skip bins are used, bunding should not be necessary. However, the bins should be covered to prevent them from filling with rainwater.</p>

Procedure	Details
<u>Step 4:</u> Excavation & Handling	<p>PASS disturbed during development works should be immediately transferred to the designated treatment area and spread out in 150mm to 300mm thick layers.</p> <p>If possible the layers should be allowed to dry in order to aid the mixing process. The layers should then be interspersed with the appropriate amount of lime to aid in the effective mixing of lime and soil. Lime should be applied to the excavated material within the treatment area as soon as possible.</p> <p>If circumstances prevent the spreading and treatment of the material, the surface area of the stockpile should be minimised by forming a relatively high coned shape and avoiding ‘spreading-out’ of the stockpile. This will limit the surface area exposed to oxidation. Water infiltration should be minimised by covering the stockpile during wet weather. This will limit the formation and transport of acid leachate due to rainfall. The stockpile should be bunded to prevent erosion of the PASS and any movement of potentially acid leachate. Upstream surface runoff water should also be diverted around the stockpile.</p>
<u>Step 5:</u> Lime Treatment & pH Testing	<p>The laboratory analysis results have indicated that approximately 8kg lime per tonne of soil is required to adequately stabilise the PASS.</p> <p>The pH of the soil should be checked using the test method(s) outlined in the ASS Manual 1998 (Methods 21A and or 21Af) to confirm that PASS have been neutralised by lime addition. If required, additional lime should be added to the soil and additional mixing undertaken. Following treatment with lime the pH of the soil should be in the 5.5 to 8.5 range.</p> <p>A backhoe or suitable equipment should be used to thoroughly mix the lime through the soil. Alternatively use of a pug mill may be considered dependent upon the volume of soil to be treated in a timely fashion.</p>
<u>Step 6:</u> Monitoring by qualified personnel	<p>Monitoring should be undertaken by qualified personnel to ensure the mixing is undertaken to a suitable extent as the success of the neutralisation method relies on the effectiveness of the mixing process.</p>
<u>Step 7:</u> WC and off-site disposal	<p>Following treatment the material should be tested and assigned a waste classification in accordance with the Waste Classification Guidelines 2009. All neutralised material should be disposed of off-site to a NSW EPA landfill licensed to accept treated PASS/ASS.</p>

### 8.2.3 Treatment of PASS and On-site Re-use (Option C)

Potential acid generation is typically managed by the addition of lime to neutralise acid that may be generated during and after the excavation works. The treated material may be re-used on-site provided it is capped and not left exposed.

The procedures outlined in the following table should be implemented for this option:

Table 8-4: Management Procedure for Option C

Procedure	Details
<u>Steps 1 to 6</u>	As outlined in Option B.
<u>Step 7: On-site Re-use</u>	<p>Treated PASS should not be spread over sensitive areas (e.g. landscaped areas) or directly adjacent to waterways.</p> <p>The area where the treated PASS is going to be placed should be cleared and, if present, the turf should be removed. The area should be dusted with lime. The neutralised PASS should then be spread across the placement area in layers. Care should be taken not to disturb the underlying soil.</p> <p>On completion, the surface of the neutralised PASS should be dusted with additional lime prior to capping. A suitable capping layer (such as a clay liner or crushed sandstone) should be placed over the neutralised PASS. The finished surface should be turfed or paved to minimise the potential for erosion.</p>

### 8.3 Groundwater Seepage and Dewatering

The procedure for managing groundwater seepage and dewatering during development works is outlined in the following table:

Table 8-5: Procedure for Managing Groundwater Seepage and Dewatering

Procedure	Details
<u>Step 1:</u> Minimise the depth of dewatering	Where possible the depth of dewatering should be minimised to reduce the generation of ASS and/or acidic conditions. Excavation and dewatering works should be staged over short durations to reduce the time and volume of PASS exposed to oxidation.
<u>Step 2:</u> Approvals for Groundwater Disposal	Reference should be made to the local council, NSW Office of Water (HOW), Sydney Water and other relevant authority's approval requirements for further information in relation to disposal of water to either the sewer or stormwater systems.



Procedure	Details
<u>Step 2: pH Testing and Neutralisation</u>	<p>Water pumped from the excavation should be placed in a portable tank, or appropriate holding facility, where samples can be obtained for testing.</p> <p>The water should be in the pH range of 6.5 to 8.5 (<i>Schedule 5 of Protection of the Environment Operations (General) Regulation 2009</i><sup>11</sup>). If the pH is outside of this range, treatment will be necessary prior to disposal. Based on the disposal option chosen for the development, additional screening for contaminants may be required by the relevant authorities prior to disposal.</p>
<u>Step 3: On-going groundwater monitoring</u>	<p>In the event that extended pumping of water is necessary during the construction period, the quality of the groundwater should be monitored on a regular basis over the entire construction period.</p> <p>The pH should be measured and recorded on a regular basis. Immediate advice is to be sought from an experienced consultant if the pH at any location is not within 10% of the initial pH at the commencement of pumping. If required, corrective action should be taken as soon as possible. Laboratory analysis will be required on water samples as part of the corrective action to assess the quantity of neutralising agents required if treatment is necessary.</p>

#### 8.4 Contingency Plan

In the event the results of soil neutralisation or groundwater monitoring tests indicate a significant change in acidic conditions, the contingency plan should be implemented.

If soil monitoring indicates the presence of significantly more acidic material than expected or water monitoring indicates that the pH of the pumped water has become significantly more acidic, all excavation works should be placed on hold until further action is taken to limit the oxidation of PASS in the development area. Contingency works will be undertaken as follows:

- The depth to groundwater (i.e. the extent of de-watering) in the area of excavation will be measured;
- The pH of soils exposed to oxygen within the excavation will be measured to establish the source of the acidic conditions;
- Material found to be acidic will be excavated and neutralised in accordance with the methods presented in **Section 8**;
- Where suitable, in-place treatment involving lime addition and mixing may be adopted; and
- In the event unacceptable acidic levels are recorded by the groundwater monitoring, installation of a neutralisation trench (or similar) may be required to intercept and treat acidic groundwater prior to discharge. This could consist of an excavation filled with a sand/lime mixture designed to filter, intercept and treat groundwater flowing across the trench.

<sup>11</sup> Schedule 5 Prescribed matter for the definition of water pollution, *Protection of Environment Operations (General) Regulation*, NSW Government, 2009, page 124 (POEO Regulation 2009)

## **8.5      Disposal Information**

The costs associated with the treatment and off-site disposal of PASS can be significant and may affect project viability. These costs should be assessed at an early stage of the project to avoid significant future unexpected additional costs.

Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner. EIS accepts no liability whatsoever for the unlawful disposal of any waste from any site.

## **9          LIMITATIONS**

The report limitations are outlined below:

- EIS accepts no responsibility for any unidentified ASS issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the EIS proposal; and terms of contract between EIS and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- EIS have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. EIS should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa;

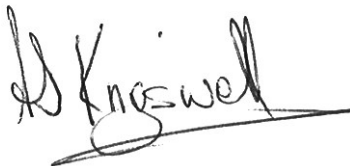
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and
- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Kind Regards



Vittal Boggaram  
Associate Environmental Scientist



Adrian Kingswell  
Principal

**Attachments:**

- 1) Report Figures
- 2) Report Tables
- 3) Appendices

## **REPORT FIGURES**



**NOTES:**  
 Figure 1 has been recreated from UBD on disc (version 5.0) and NSW Department of Lands SIX Maps. Figure is not to scale.

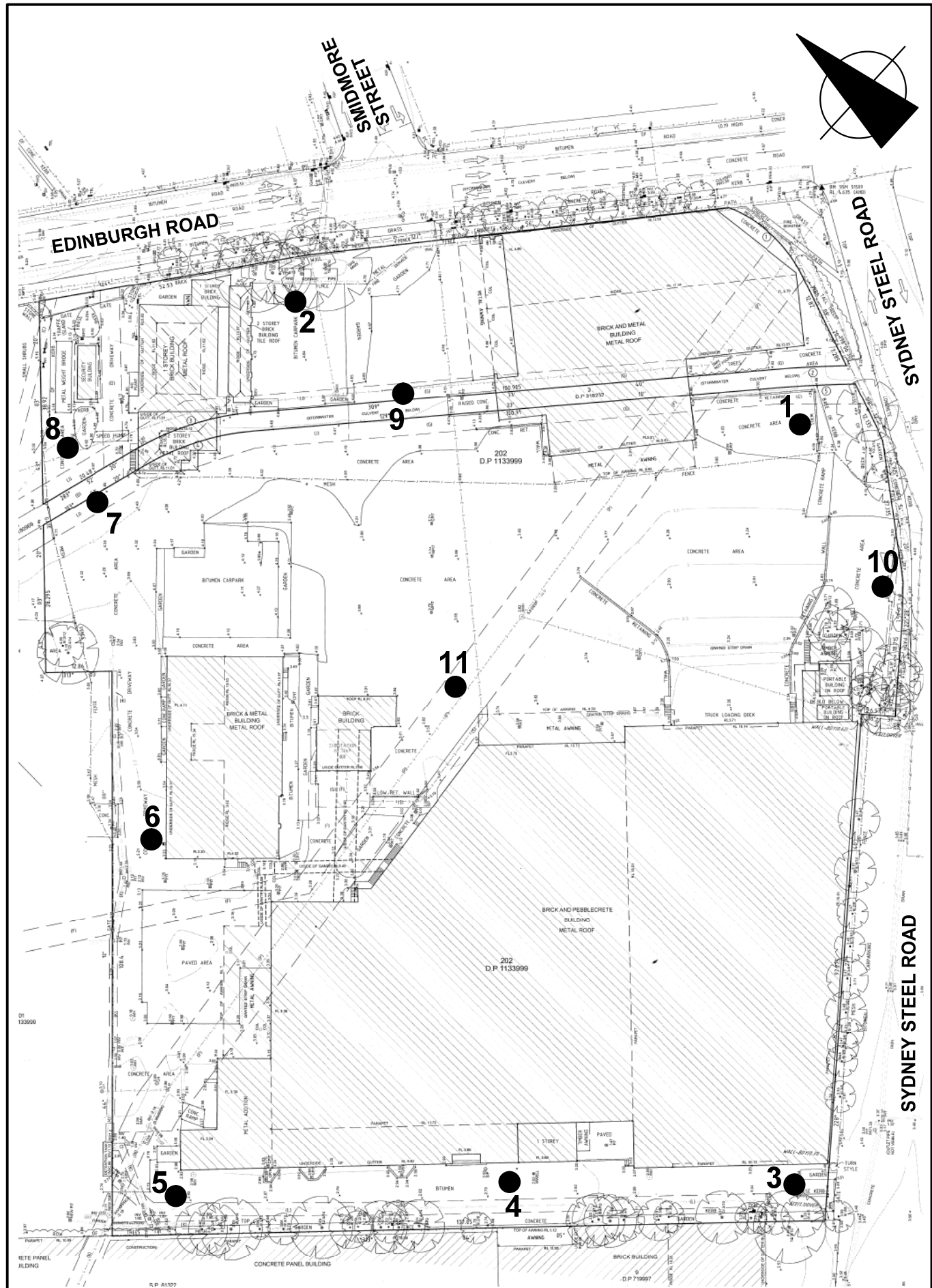
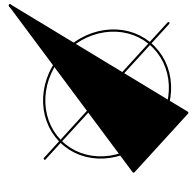
UBD Map ref: 17 K6 and K7

Reference should be made to the report text for a full understanding of this plan.



Project Number: <b>E28042KB</b>	Title: <b>SITE LOCATION PLAN</b>
Figure: <b>1</b>	Address: <b>74 EDINBURGH ROAD, MARRICKVILLE, NSW</b>





SCALE (m)



ENVIRONMENTAL  
INVESTIGATION  
SERVICES

Project Number:

E28042KB

Title:

BOREHOLE LOCATION PLAN

Figure:

2

Address:

74 EDINBURGH ROAD,  
MARRICKVILLE, NSW

## **REPORT TABLES**

**TABLE A**  
**SUMMARY OF LABORATORY RESULTS - ACID SULFATE SOILS ANALYSIS (sPOCAS)**

		Analysis	pH <sub>KCL</sub>	TAA	pH <sub>ox</sub>	TPA	TSA	S <sub>POS</sub>	S <sub>Cr</sub>	Liming Rate
				pH 6.5		pH 6.5	pH 6.5	%w/w	%w/w	kg CaCO <sub>3</sub> /tonn
Action Criteria <sup>1</sup> :		Fine Textured Soil	pH 5.0	62molH+/ tonne	pH 5.0	62molH+/ tonne	62molH+/ tonne	0.1% w/w	0.1% w/w	
Sample Reference	Sample Depth (m)	Sample Description								
BH1	4.7-4.95	Silty Clay	4.8	25	5.4	25	LPQL	LPQL	NA	2
BH1	6.2-6.45	Silty Clay	5.6	15	6.7	LPQL	LPQL	LPQL	NA	1.1
BH4	1.7-1.95	Silty Clay	5.6	10	4.9	25	15	0.03	NA	2.4
BH4	4.2-4.95	Silty Clay	6.6	LPQL	6.2	LPQL	LPQL	LPQL	NA	LPQL
BH7	3.2-3.45	Silty Clay	3.9	87	4.5	70	LPQL	0.005	NA	7.7
BH9	1.5-1.95	Silty Clay	6.2	5	5.8	LPQL	LPQL	0.005	NA	LPQL
BH9	6-6.45	Silty Clay	5.0	12	5.7	7	LPQL	LPQL	NA	1
BH11	1.6-1.8	Silty Clay	8.4	LPQL	7.8	LPQL	LPQL	LPQL	NA	LPQL
BH11	3-3.45	Silty Clay	6.2	5	4.0	32	27	0.15	NA	7.3
BH11	4.2-4.4	Silty Clay	6.4	LPQL	4.5	20	17	0.06	NA	2.9
Total Number of Samples			10	10	10	10	10	10	0	10
Minimum Value			3.9	5	4	7	15	0.005	0	1
Maximum Value			8.4	87	7.8	70	27	0.15	0	7.7

**Explanation:**

<sup>1</sup> The Action criteria have been adopted from the Acid Sulfate Soil Manual (1998).

Values Exceeding Action Criteria

VALUE

**Abbreviations:**

pH<sub>KCL</sub> : pH of filtered 1:20, 1M KCL extract, shaken overnight

TAA pH 6.5 : Total Actual Acidity in 1M KCL extract titrated to pH6.5

pH<sub>ox</sub> : pH filtered 1:20 1M KCl after peroxide digestion

TPA : Total Potential Acidity, 1M KCL peroxide digest titrated to pH6.5

TSA: Total Sulfide Acidity

S<sub>POS</sub>: Peroxide oxidisable Sulfur (SP - SKCL)

## **Appendix A: Borehole Logs**



BOREHOLE LOG

Borehole No.  
**1**  
1/2

Client:MASTERS HOME IMPROVEMENT

Project:PROPOSED MASTERS DEVELOPMENT

Location:CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 5-1-15

Method: SPIRAL AUGER  
JK350

Logged/Checked by: R.C./A.J.

R.L. Surface: ≈ 4.1m

Datum: AHD

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks	
	ES	U50	DB	DS										
<div>▼ AFTER 7 HRS</div>					N = 9 4,5,4	0		-	CONCRETE: 100mm.t FILL: Sandy gravel, fine to coarse grained, igneous, grey, fine to coarse grained sand, trace of silt fines. FILL: Sandy gravel, fine to coarse grained, sandstone, grey and orange brown, fine to medium grained sand.	M			NO OBSERVED REINFORCEMENT APPEARS POORLY COMPACTED	
						1			FILL: Silty clay, medium plasticity, grey and dark grey, trace of ash.	MC>PL			POSSIBLY NATURAL	
					N = 10 3,4,6	2		CH	SILTY CLAY: high plasticity, grey mottled orange brown, trace of roots.	MC>PL	St-VSt	150 220 130	ALLUVIAL	
									SILTY CLAY: high plasticity, grey mottled red brown.		VSt			
					N = 17 5,7,10	3					VSt-H	300 510 420		
						4			as above, but light grey mottled orange brown, trace of fine to medium grained ironstone gravel.		St-VSt			
					N = 21 5,11,10	5						220 190 320		
						6					H	470 460 400	RESIDUAL	
					N = 31 10,12,19	7								

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BOREHOLE LOG

Borehole No.  
**1**  
2/2

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER JK350 <b>R.L. Surface:</b> ≈ 4.1m												
<b>Date:</b> 5-1-15 <b>Logged/Checked by:</b> R.C./A.J. <b>Datum:</b> AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
ON COMPLETION							CH	SILTY CLAY: high plasticity, light grey mottled orange brown, trace of fine to medium grained ironstone gravel.	MC>PL	H		NO RECOVERY IN SPT SPLIT SPOON SAMPLER
				N = 27 11,13,14	8							
				N > 40 11,24, 16/100mm REFUSAL	9			as above, but with XW shale bands.	MC<PL		580 >600 >600	
					10		-	SHALE: grey, with iron indurated bands.	XW-DW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
					11			SHALE: dark grey.	SW	L-M		LOW RESISTANCE
					12			END OF BOREHOLE AT 12.0m				
					13							
					14							



BOREHOLE LOG

Borehole No.  
2  
1/1

Client: MASTERS HOME IMPROVEMENT

Project: PROPOSED MASTERS DEVELOPMENT

Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 5-1-15

Method: SPIRAL AUGER  
JK350

Logged/Checked by: R.C./A.J.

R.L. Surface: ≈ 4.9m

Datum: AHD

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLET- ION					0		-	ASPHALTIC CONCRETE: 150mm.t FILL: Gravelly silty sand, fine to medium grained, dark grey, fine to coarse grained igneous gravel, trace of igneous cobbles and clay fines.	D			APPEARS MODERATELY COMPACTED
				SPT 11/20mm REFUSAL	1		CL	SILTY CLAY: medium plasticity, orange brown, trace of fine grained ironstone gravel and ash.	MC<PL	H		ALLUVIAL
				N = 11 4,4,7							520 >600 >600	
					2			END OF BOREHOLE AT 1.95m				
					3							
					4							
					5							
					6							
					7							



BOREHOLE LOG

Borehole No.
3
1/2

<div>Client: MASTERS HOME IMPROVEMENT</div> <div>Project: PROPOSED MASTERS DEVELOPMENT</div> <div>Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW</div>													
<div>Job No. 28042ZA</div> <div>Date: 5-1-15</div>				<div>Method: SPIRAL AUGER</div> <div>JK350</div> <div>Logged/Checked by: R.C./A.J.</div>				<div>R.L. Surface: ≈ 3.2m</div> <div>Datum: AHD</div>					
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
▼ AFTER 4 HRS						0		-	ASPHALTIC CONCRETE: 100mm.t				
								-	FILL: Gravel, fine to medium grained igneous, dark grey, with fine to coarse grained sand and silt fines.	D			
					N = 32 10,20,12			-	CONCRETE: 100mm.t	MC≈PL		>600 >600	APPEARS WELL COMPACTED
						1			FILL: Silty clay, low plasticity, grey brown and orange brown, trace of fine to medium grained sand, ash and slag.				
					N = 40 12,20,20			CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	MC<PL	H	>600 >600 >600	ALLUVIAL
						2				MC>PL			
					N = 24 8,10,14							410 500 510	
						3							
					N = 29 10,14,15						VSt- H	400 380 460	
						4							
						5							
					N = 29 9,11,18						H	410 410 550	RESIDUAL
						6							
						7							



# BOREHOLE LOG

Borehole No.  
**3**  
2/2

<div>Client: MASTERS HOME IMPROVEMENT</div> <div>Project: PROPOSED MASTERS DEVELOPMENT</div> <div>Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW</div>													
<div>Job No. 28042ZA      Method: SPIRAL AUGER      R.L. Surface: ≈ 3.2m</div> <div>Date: 5-1-15      JK350      Datum: AHD</div> <div>Logged/Checked by: R.C./A.J.</div>													
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
<div>▲</div>						8		CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	MC>PL	H		
						9							
						10		-	SHALE: grey, with iron indurated bands and clay bands.	XW	EL		VERY LOW 'TC' BIT RESISTANCE
						11			END OF BOREHOLE AT 10.5m				
						12							
						13							
						14							



BOREHOLE LOG

Borehole No.  
4  
1/2

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER JK350 <b>R.L. Surface:</b> ≈ 2.9m												
<b>Date:</b> 5-1-15 <b>Logged/Checked by:</b> R.C./A.J. <b>Datum:</b> AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
<div>ON COMPLETION</div>					0		-	ASPHALTIC CONCRETE: 150mm.t CONCRETE: 200mm.t				
				N > 12 10,12/ 100mm			-	FILL: Silty sand, fine to medium grained, grey and dark grey, trace of fine to coarse grained sandstone gravel, ash and slag.	M			APPEARS WELL COMPACTED
				REFUSAL	1			FILL: Silty clay, medium to high plasticity, dark grey, trace of ash and fine to medium grained ironstone gravel.	MC>PL			APPEARS MODERATELY COMPACTED
				N = 8 2,4,4			CH	SILTY CLAY: high plasticity, orange brown mottled grey.	MC>PL	St-VSt	150 190 240	ALLUVIAL
					2			as above, but light grey mottled orange brown.				
				N = 10 4,5,5	3						190 190 220	
					4							
				N = 14 7,6,8	5					VSt	320 330 380	
					6					VSt-H		NO RECOVERY IN SPT SPLIT SPOON SAMPLER
				N = 26 7,10,16	7							RESIDUAL





BOREHOLE LOG

Borehole No.

4

2/2

Client:MASTERS HOME IMPROVEMENT

Project:PROPOSED MASTERS DEVELOPMENT

Location:CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 5-1-15

Method: SPIRAL AUGER  
JK350

Logged/Checked by: R.C./A.J.

R.L. Surface: ≈ 2.9m

Datum: AHD

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
						8		CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	(MC>PL)	(VSI-H)		NO INSITU TESTING AND SMPLING BETWEEN 6.5m AND 11.5m AS PURPOSE BEHIND BOREHOLE DEEEPENING WAS TO PROVE BEDROCK
						9							
						10							
						11		-	SHALE: grey, with iron indurated bands and clay bands.	XW	EL		VERY LOW 'TC' BIT RESISTANCE
						12			END OF BOREHOLE AT 12.0m				
						13							
						14							



BOREHOLE LOG

Borehole No.  
**5**  
1/2

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER <b>R.L. Surface:</b> ≈ 2.9m												
<b>Date:</b> 5-1-15 <b>JK350</b> <b>Datum:</b> AHD												
<b>Logged/Checked by:</b> R.C./A.J.												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0		-	ASPHALTIC CONCRETE: 35mm.t	M			NO OBSERVED REINFORCEMENT APPEARS MODERATELY COMPACTED
				N = 14 4,6,8			-	FILL: Gravel, fine to coarse grained igneous, dark grey, trace of fine to coarse grained sand and silt fines. CONCRETE: 200mm.t	M			
					1			FILL: Silty sandy gravel, fine to coarse grained igneous, grey and brown, fine to coarse grained sand, with brick and slag fragments.				
				N = 5 4,3,2	2							
				N = 2 2,1,1	3							
					4		CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	MC>PL	St- VSt		ALLUVIAL
				N = 19 3,8,11	5					VSt- H	280 450 530	
					6						400 410 320	
				N = 24 7,11,13	7							



BOREHOLE LOG

Borehole No.

5

2/2

Client: MASTERS HOME IMPROVEMENT

Project: PROPOSED MASTERS DEVELOPMENT

Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 5-1-15

Method: SPIRAL AUGER  
JK350

Logged/Checked by: R.C./A.J.

R.L. Surface: ≈ 2.9m

Datum: AHD

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
								CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	MC>PL	VSt	300 340	HP TESTING CARRIED OUT ON REMOULDED SAMPLE
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							



BOREHOLE LOG

Borehole No.  
**6**  
1/2

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER <b>R.L. Surface:</b> ≈ 3.3m												
<b>Date:</b> 5-1-15 <b>JK350</b> <b>Datum:</b> AHD												
<b>Logged/Checked by:</b> R.C./A.J.												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0		-	CONCRETE: 200mm.t	M			5mm DIA. REINFORCEMENT, 140mm TOP COVER
				N = 3 1,1,2			CL	FILL: Silty sandy gravel, fine to medium grained igneous, dark grey, fine to coarse grained sand.	MC>PL	F-St	90 100 110	ALLUVIAL
					1			FILL: Silty clay, medium plasticity, brown, trace of fine to medium grained sand and ash.	MC>PL			
				N = 16 5,7,9			CH	SILTY CLAY: medium plasticity, orange brown mottled grey.		VSt	370 300 360	
					2			SILTY CLAY: high plasticity, light grey mottled orange brown, trace of fine to coarse grained ironstone gravel.				
				N = 17 5,8,9	3						360 350 380	
					4			as above, but without ironstone gravel.			280 280 240	
				N = 19 5,7,12	5							
				N > 20 11,20/ 150mm REFUSAL	6			as above, but with ironstone gravel bands and XW shale bands.	MC<PL	H		RESIDUAL
					7							



BOREHOLE LOG

Borehole No.

6

2/2

Client: MASTERS HOME IMPROVEMENT

Project: PROPOSED MASTERS DEVELOPMENT

Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 5-1-15

Method: SPIRAL AUGER  
JK350

Logged/Checked by: R.C./A.J.

R.L. Surface: ≈ 3.3m

Datum: AHD

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
								CH	SILTY CLAY: high plasticity, light grey mottled orange brown, with ironstone gravel bands and XW shale bands.	MC<PL	H		
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							





BOREHOLE LOG

Borehole No.  
**7**  
1/2

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER JK350 <b>R.L. Surface:</b> ≈ 4.8m												
<b>Date:</b> 9-1-15 <b>Datum:</b> AHD												
<b>Logged/Checked by:</b> D.A.F./A.J.												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0		-	CONCRETE: 190mm.t				5mm DIA. REINFORCEMENT, 110mm TOP COVER
				N = 7 4,4,3	1			FILL: Gravelly sand, fine to coarse grained, light brown, fine to coarse grained sandstone gravel, medium to coarse grained igneous gravel, trace of silt.	M			APPEARS POORLY COMPACTED
					2			FILL: Silty clay, high plasticity, orange brown, brown and dark brown, trace of fine to medium grained igneous gravel and ash.	MC>PL		50 50 60	
				N = 3 1,2,1	3		CH	SILTY CLAY: high plasticity, light grey and orange brown, trace of fine to coarse grained ironstone gravel.	MC>PL	St-VSt		ALLUVIAL
					4				MC<PL	H		RESIDUAL
▼ AFTER 1 HR & 2 HRS				N = 20 5,9,11	5		-	SHALE: dark grey.	XW	EL	450 470 450	VERY LOW 'TC' BIT RESISTANCE
				N > 20 11,20/ 150mm REFUSAL	6			as above, but with M strength iron indurated bands.	DW	L		LOW RESISTANCE



BOREHOLE LOG

Borehole No.

7

2/2

Client:MASTERS HOME IMPROVEMENT

Project:PROPOSED MASTERS DEVELOPMENT

Location:CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 9-1-15

Method: SPIRAL AUGER  
JK350

R.L. Surface: ≈ 4.8m

Datum: AHD

Logged/Checked by: D.A.F./A.J.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
									SHALE: dark grey, with M strength iron indurated bands.	DW	L		LOW 'TC' BIT RESISTANCE
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							

# BOREHOLE LOG

**Client:** MASTERS HOME IMPROVEMENT  
**Project:** PROPOSED MASTERS DEVELOPMENT  
**Location:** CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

**Date:** 9-1-15

**Datum:** AHD

**Logged/Checked by:** D.A.F./A.J.

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	US	DB DS									
DRY ON COMPLETION					0		-	CONCRETE: 190mm.t	M			5mm DIA. REINFORCEMENT, 50mm TOP COVER
				N = 6 6,3,3				FILL: Gravelly sand, fine to coarse grained, light brown, fine to coarse grained sandstone gravel, medium to coarse grained igneous gravel, trace of concrete fragments and silt.	MC>PL			APPEARS MODERATELY COMPACTED
					1			FILL: Silty clay, high plasticity, brown and dark brown, trace of ash and fine to coarse grained sandstone and igneous gravel.				
				N = 6 2,3,3			CH	SILTY CLAY: high plasticity, orange brown, trace of fine grained ironstone gravel.	MC>PL	VSt	220 310 300	ALLUVIAL
					2							
▼ AFTER 1.25 HRS				N = 16 5,7,9				as above, but light grey, with bands of fine to medium grained ironstone gravel.			220 250 280	
					3							
					4				MC<PL	H		RESIDUAL
				N = 29 11,14,15								
					5		-	SHALE: grey and dark grey.	XW	EL		VERY LOW 'TC' BIT RESISTANCE
▼ AFTER 20 MINS					6							
					7			as above, but dark grey and orange brown.	DW	L-M		LOW RESISTANCE



BOREHOLE LOG

Borehole No.

8

2/2

Client:MASTERS HOME IMPROVEMENT

Project:PROPOSED MASTERS DEVELOPMENT

Location:CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 9-1-15

Method: SPIRAL AUGER  
JK350

R.L. Surface: ≈ 5.0m

Datum: AHD

Logged/Checked by: D.A.F./A.J.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
									SHALE: dark grey and orange brown.	DW	L-M		LOW RESISTANCE
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							



BOREHOLE LOG

Borehole No.
9
1/2

Client: MASTERS HOME IMPROVEMENT
Project: PROPOSED MASTERS DEVELOPMENT
Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW
Job No. 28042ZA
Date: 9-1-15
Method: SPIRAL AUGER JK350
R.L. Surface: ≈ 4.3m
Datum: AHD
Logged/Checked by: D.A.F./A.J.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
						0			CONCRETE: 250mm.t				5mm DIA. REINFORCEMENT, 100mm TOP COVER
					N = 4 4,2,2			-	FILL: Gravelly sand, fine to coarse grained, dark grey, fine to coarse grained igneous gravel.	M			
						1			FILL: Silty clay, high plasticity, dark brown, brown and orange brown, trace of fine to coarse grained sand, and fine to coarse grained igneous gravel.	MC>PL			APPEARS POORLY COMPACTED
					N = 7 3,3,4			CH	SILTY CLAY: high plasticity, orange brown and light grey.	MC>PL	St	110 140 130	ALLUVIAL
						2							
						3			as above, but red brown, orange brown and grey.	MC≈PL	VSt-H	370 380 420	
					N = 24 7,10,14								
						4			SILTY CLAY: high plasticity, grey.		H		
						5						440 450 460	
					N = 26 7,10,16								
						6				MC<PL			RESIDUAL
					N > 29 8,13, 16/100mm REFUSAL								
						7							

AFTER 1 HR  
AFTER 15 MINS



BOREHOLE LOG

Borehole No.

9

2/2

Client:

MASTERS HOME IMPROVEMENT

Project:

PROPOSED MASTERS DEVELOPMENT

Location:

CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No.

28042ZA

Date:

9-1-15

Method:

SPIRAL AUGER  
JK350

R.L. Surface:

≈ 4.3m

Datum:

AHD

Logged/Checked by:

D.A.F./A.J.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
▼								CH	SILTY CLAY: high plasticity, grey.	MC<PL	H		
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							





BOREHOLE LOG

Borehole No.
10
1/2

Client: MASTERS HOME IMPROVEMENT
Project: PROPOSED MASTERS DEVELOPMENT
Location: CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW
Job No. 28042ZA
Date: 9-1-15
Method: SPIRAL AUGER JK350
R.L. Surface: ≈ 3.8m
Datum: AHD
Logged/Checked by: D.A.F./A.J.

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks	
	ES	U50	DB										
DRY ON COMPLETION					0		-	CONCRETE: 160mm.t				5mm DIA. REINFORCEMENT, 100mm TOP COVER	
				N = 17 9,9,8				FILL: Silty sand, fine to coarse grained, brown, trace of concrete and brick fragments and clay lumps.	M				
					1			FILL: Silty clay, medium plasticity, brown, dark brown and orange brown, trace of concrete and brick fragments.	MC<PL		>600 >600 >600	APPEARS WELL COMPACTED	
				N = 17 8,9,8	2	CH		SILTY CLAY: high plasticity, grey and orange brown.	MC<PL	H	>600 >600 >600	ALLUVIAL	
				N = 16 6,7,9	3			SILTY CLAY: high plasticity, dark grey.	MC>PL	VSt	230 200 250		
				N = 22 6,11,11	4								
					5			as above, but orange brown and grey, trace of fine to medium grained ironstone gravel.			240 370 360		
				N = 21 8,10,11	6						330 300 380		
					7			SILTY CLAY: as below.	MC≈PL			RESIDUAL	



BOREHOLE LOG

Borehole No.

10

2/2

Client:MASTERS HOME IMPROVEMENT

Project:PROPOSED MASTERS DEVELOPMENT

Location:CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW

Job No. 28042ZA

Date: 9-1-15

Method: SPIRAL AUGER  
JK350

R.L. Surface: ≈ 3.8m

Datum: AHD

Logged/Checked by: D.A.F./A.J.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
								CH	SILTY CLAY: high plasticity, red brown, trace of fine to medium grained ironstone gravel.	MC~PL	VSt		
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							



BOREHOLE LOG

Borehole No.  
**11**  
1/1

<b>Client:</b> MASTERS HOME IMPROVEMENT												
<b>Project:</b> PROPOSED MASTERS DEVELOPMENT												
<b>Location:</b> CNR. EDINBURGH ROAD AND SYDNEY STEEL ROAD, MARRICKVILLE, NSW												
<b>Job No.</b> 28042ZA <b>Method:</b> SPIRAL AUGER JK350 <b>R.L. Surface:</b> ≈ 3.6m												
<b>Date:</b> 9-1-15 <b>Logged/Checked by:</b> D.A.F./A.J. <b>Datum:</b> AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
<div>ON COMPLETION</div>					0		-	CONCRETE: 170mm.t				8mm DIA. REINFORCEMENT, 60mm TOP COVER  APPEARS POORLY COMPACTED          NO RECOVERY IN SPT SPLIT SPOON SAMPLER
				N > 12 9,12/ 150mm REFUSAL	1		FILL: Gravelly sand, fine to medium grained, brown and dark brown, fine to medium grained igneous gravel, with nails.	M				
							FILL: Silty clay, high plasticity, grey and orange brown.	MC>PL				
				N = 4 3,2,2	2							
							as above, but grey and dark brown, trace of medium to coarse grained ironstone gravel.					
				N = 2 1,1,1	3					20 30 50		
							FILL: Silty clay, high plasticity, grey.					
					4							
				SPT 4/0mm REFUSAL	5		as above, but with brick fragments.					
					6		END OF BOREHOLE AT 6.0m					
				7								

## EXPLANATORY NOTES – ENVIRONMENTAL LOGS

### INTRODUCTION

These notes have been provided to supplement the environmental report with regards to drilling and field logging. Not all notes are necessarily relevant to all reports. Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and manmade processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies involve gathering and assimilating limited facts about these characteristics and properties in order to understand the ground on a particular site under certain conditions. These conditions are directly relevant only to the ground at the place where, and time when, the investigation was carried out.

### DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, the SAA Site Investigation Code. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geotechnical practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the grading of other particles present (e.g. sandy clay) as set out below (note that unless stated in the report, the soil classification is based on a qualitative field assessment, not laboratory testing):

Soil Classification	Particle Size
Clay	less than 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose	less than 4
Loose	4 – 10
Medium dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) either by use of hand penetrometer, laboratory testing or engineering examination. The strength terms are defined as shown in the following table:

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 – 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 – 400
Hard	Greater than 400
Friable	Strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'Shale' is used to describe thinly bedded to laminated siltstone.

#### DRILLING OR EXCAVATION METHODS

The following is a brief summary of drilling and excavation methods currently adopted by the Company, and some comments on their use and application. All except test pits and hand auger drilling require the use of a mechanical drilling rig.

**Test Pits:** These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the in-situ soils if it is safe to descend into the pit. The depth of penetration is limited to approximately 3m for a backhoe and up to 6m for an excavator. Limitations of test pits include problems associated with disturbance and difficulty of reinstatement; and the consequent effects on nearby structures. Care must be taken if construction is to be carried out near test pit locations to either properly re-compact the backfill during construction, or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

**Hand Auger Drilling:** A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as fill, hard clay, gravel or ironstone, and does not necessarily indicate rock level.

**Continuous Spiral Flight Augers:** The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and in-situ testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

**Rock Augering:** Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock fragments. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

**Wash Boring:** The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from "feel" and rate of penetration.

**Mud Stabilised Drilling:** Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term ‘mud’ encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (e.g. from SPT and U50 samples) or from rock coring, etc.

**Continuous Core Drilling:** A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel, which gives a core of about 50mm diameter, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS. The locations of losses are determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the top end of the drill run.

**Standard Penetration Tests:** Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, “Methods of Testing Soils for Engineering Purposes” – Test F3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the ‘N’ value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of, say, 4, 6 and 7 blows, as:  $N = 13 (4, 6, 7)$
- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as:  $N > 30 (15, 30/40\text{mm})$

The results of the test can be related empirically to the engineering properties of the soil. Occasionally, the drop hammer is used to drive 50mm diameter thin walled sample tubes (U50) in clays. In such circumstances, the test results are shown on the borehole logs in brackets.

A modification to the SPT test is where the same driving system is used with a solid 60 tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as “Nc” on the borehole logs, together with the number of blows per 150mm penetration.

## LOGS

The borehole or test pit logs presented herein are an interpretation of the subsurface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will enable the most reliable assessment, but is not always practicable or possible to justify on economic grounds. In any case, the boreholes or test pits represent only a very small sample of the total subsurface conditions.

The attached explanatory notes define the terms and symbols used in preparation of the logs.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than “straight line”



variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

### **GROUNDWATER**

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open;
- A localised perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must be washed out of the hole or 'reverted' chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after stabilising at intervals ranging from several days to perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

### **FILL**

The presence of fill materials can often be determined only by the inclusion of foreign objects (e.g. bricks, concrete, plastic, slag/ash, steel etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably determine the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density, strength and material type is much greater than with natural soil deposits. If the volume and quality of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes


































### **LABORATORY TESTING**

Laboratory testing has not been undertaken to confirm the soil classifications and rocks strengths indicated on the environmental logs unless noted in the report.

### **SITE ANOMALIES**

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, EIS should be notified immediately.

## GRAPHIC LOG SYMBOLS FOR SOIL AND ROCKS

SOIL	ROCK	DEFECTS AND INCLUSIONS
 FILL	 CONGLOMERATE	 CLAY SEAM
 TOPSOIL	 SANDSTONE	 SHEARED OR CRUSHED SEAM
 CLAY (CL, CH)	 SHALE	 BRECCIATED OR SHATTERED SEAM/ZONE
 SILT (ML, MH)	 SILTSTONE, MUDSTONE, CLAYSTONE	 IRONSTONE GRAVEL
 SAND (SP, SW)	 LIMESTONE	 ORGANIC MATERIAL
 GRAVEL (GP, GW)	 PHYLLITE, SCHIST	
 SANDY CLAY (CL, CH)	 TUFF	
 SILTY CLAY (CL, CH)	 GRANITE, GABBRO	
 CLAYEY SAND (SC)	 DOLERITE, DIORITE	
 SILTY SAND (SM)	 BASALT, ANDESITE	
 GRAVELLY CLAY (CL, CH)	 QUARTZITE	
 CLAYEY GRAVEL (GC)		
 SANDY SILT (ML)		
 PEAT AND ORGANIC SOILS		
		<b>OTHER MATERIALS</b>
		 CONCRETE
		 BITUMINOUS CONCRETE, COAL
		 COLLUVIUM

Field Identification Procedures (Excluding particles larger than 75 μm and basing fractions on estimated weights)				Group Symbols	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria	
Coarse-grained soils More than half of material is larger than 75 μm sieve size <sup>b</sup> (The 75 μm sieve size is about the smallest particle visible to naked eye)	Gravels More than half of coarse fraction is larger than 4 mm sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GW	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses  For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics  Example: Silty sand, gravelly; about 20% hard, angular gravel particles 12 mm maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (SM)	$C_U = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3  Not meeting all gradation requirements for GW  Atterberg limits below "A" line, or PI less than 4  Atterberg limits above "A" line, with PI greater than 7	
			Predominantly one size or a range of sizes with some intermediate sizes missing	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines			
		Gravels with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures see ML below)	GM	Silty gravels, poorly graded gravel-sand-silt mixtures			
	Sands More than half of coarse fraction is smaller than 4 mm sieve size	Clean sands (little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes	SW	Well graded sands, gravelly sands, little or no fines			
			Predominantly one size or a range of sizes with some intermediate sizes missing	SP	Poorly graded sands, gravelly sands, little or no fines			
		Sands with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures, see ML below)	SM	Silty sands, poorly graded sand-silt mixtures			
Fine-grained soils More than half of material is smaller than 75 μm sieve size (The 75 μm sieve size is about the smallest particle visible to naked eye)	Identification Procedures on Fraction Smaller than 380 μm Sieve Size							
	Silt and clays liquid limit less than 50	Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)			Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses  For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions  Example: Clayey silt, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (ML)	$C_U = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3  Not meeting all gradation requirements for SP  Atterberg limits below "A" line or PI less than 5  Atterberg limits below "A" line with PI greater than 7
		None to slight	Quick to slow	None	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity		
		Medium to high	None to very slow	Medium	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
		Slight to medium	Slow	Slight	OL	Organic silts and organic silt-clays of low plasticity		
		Slight to medium	Slow to none	Slight to medium	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
		High to very high	None	High	CH	Inorganic clays of high plasticity, fat clays		
	Silt and clays liquid limit greater than 50	Medium to high	None to very slow	Slight to medium	OH	Organic clays of medium to high plasticity		
		Highly Organic Soils			PI	Peat and other highly organic soils		

Determine percentages of gravel and sand from grain size curve

Depending on percentage of fines (fraction smaller than 75 μm sieve size) coarse grained soils are classified as follows:

Less than 5% GW, GP, SW, SP  
5% to 12% GM, GC, SM, SC  
Borderline cases requiring use of dual symbols

Use grain size curve in identifying the fractions as given under field identification

Plasticity index

Comparing soils at equal liquid limit

Toughness and dry strength increase with increasing plasticity index

A line

CH

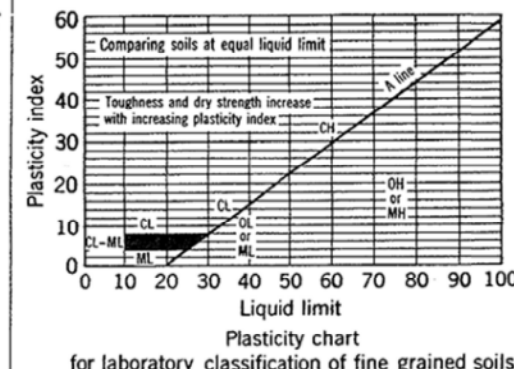
OH or MH

Liquid limit

Plasticity chart for laboratory classification of fine grained soils

Determine percentages of gravel and sand from grain size curve  
Depending on percentage of fines (fraction smaller than 75 µm sieve size) coarse grained soils are classified as follows:  
Less than 5% GW, GP, SW, SP  
More than 5% GM, GC, SM, SC  
Borderline cases requiring use of dual symbols

Use grain size curve in identifying the fractions as given under field identification



- Note: 1 Soils possessing characteristics of two groups are designated by combinations of group symbols (eg. GW-GC, well graded gravel-sand mixture with clay fines).  
2 Soils with liquid limits of the order of 35 to 50 may be visually classified as being of medium plasticity.

## LOG SYMBOLS

LOG COLUMN	SYMBOL		DEFINITION																		
Groundwater Record			Standing water level. Time delay following completion of drilling may be shown.																		
			Extent of borehole collapse shortly after drilling.																		
			Groundwater seepage into borehole or excavation noted during drilling or excavation.																		
Samples	ES	Soil sample taken over depth indicated, for environmental analysis.																			
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.																			
	DB	Bulk disturbed sample taken over depth indicated.																			
	DS	Small disturbed bag sample taken over depth indicated.																			
	ASB	Soil sample taken over depth indicated, for asbestos screening.																			
	ASS	Soil sample taken over depth indicated, for acid sulfate soil analysis.																			
	SAL	Soil sample taken over depth indicated, for salinity analysis.																			
Field Tests	N = 17 4, 7, 10		Standard Penetration Test (SPT) performed between depths indicated by lines. Individual show blows per 150mm penetration. 'R' as noted below.																		
	N <sub>c</sub> =	5	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60 degree solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.																		
		7																			
		3 R																			
VNS = 25		Vane shear reading in kPa of Undrained Shear Strength.																			
PID = 100		Photoionisation detector reading in ppm (Soil sample heads pace test).																			
Moisture (Cohesive Soils)  (Cohesionless)	MC>PL MC≈PL MC<PL D M W	Moisture content estimated to be greater than plastic limit. Moisture content estimated to be approximately equal to plastic limit. Moisture content estimated to be less than plastic limit. DRY – Runs freely through fingers. MOIST – Does not run freely but no free water visible on soil surface. WET – Free water visible on soil surface.																			
Strength (Consistency) Cohesive Soils	VS S F St VSt H ( )	VERY SOFT – Unconfined compressive strength less than 25kPa SOFT – Unconfined compressive strength 25-50kPa FIRM – Unconfined compressive strength 50-100kPa STIFF – Unconfined compressive strength 100- 200kPa VERY STIFF – Unconfined compressive strength 200- 400kPa HARD – Unconfined compressive strength greater than 400kPa Bracketed symbol indicates estimated consistency based on tactile examination or other tests.																			
Density Index/ Relative Density (Cohesionless Soils)	VL L MD D VD ( )	<table><thead><tr><th colspan="2">Density Index (ID) Range (%)</th><th>SPT 'N' Value Range (Blows/300mm )</th></tr></thead><tbody><tr><td>Very Loose</td><td>&lt; 15</td><td>0-4</td></tr><tr><td>Loose</td><td>15-35</td><td>4-10</td></tr><tr><td>Medium Dense</td><td>35-65</td><td>10-30</td></tr><tr><td>Dense</td><td>65-85</td><td>30-50</td></tr><tr><td>Very Dense</td><td>&gt; 85</td><td>&gt; 50</td></tr></tbody></table> Bracketed symbol indicates estimated density based on ease of drilling or other tests.		Density Index (ID) Range (%)		SPT 'N' Value Range (Blows/300mm )	Very Loose	< 15	0-4	Loose	15-35	4-10	Medium Dense	35-65	10-30	Dense	65-85	30-50	Very Dense	> 85	> 50
Density Index (ID) Range (%)		SPT 'N' Value Range (Blows/300mm )																			
Very Loose	< 15	0-4																			
Loose	15-35	4-10																			
Medium Dense	35-65	10-30																			
Dense	65-85	30-50																			
Very Dense	> 85	> 50																			
Hand Penetrometer Readings	300  250	Numbers indicate individual test results in kPa on representative undisturbed material unless noted otherwise																			
Remarks	'V' bit  'TC' bit  T <sub>60</sub>	Hardened steel 'V' shaped bit.  Tungsten carbide wing bit.  Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.																			

## LOG SYMBOLS CONTINUED

### ROCK STRENGTH

Rock strength is defined by the Point Load Strength Index (Is 50) and refers to the strength of the rock substance in the bedding. The test procedure is described by the International Journal of Rock Mechanics, Mining and Geomechanics Abstract Volume 22, No 2, 1985.

TERM	SYMBOL	Is (50) MPa	FIELD GUIDE
Extremely Low:	EL	0.03	Easily remoulded by hand to a material with soil properties.
Very Low:	VL	0.1	May be crumbled in the hand. Sandstone is "sugary" and friable.
Low:	L	0.3	A piece of core 150 mm long x 50mm dia. may be broken by hand and easily scored with a knife. Sharp edges of core may be friable and break during handling.
Medium Strength:	M	1	A piece of core 150 mm long x 50mm dia. can be broken by hand with difficulty. Readily scored with knife.
High:	H	3	A piece of core 150 mm long x 50mm dia. core cannot be broken by hand, can be slightly scratched or scored with knife; rock rings under hammer.
Very High:	VH	10	A piece of core 150 mm long x 50mm dia. may be broken with hand-held pick after more than one blow. Cannot be scratched with pen knife; rock rings under hammer.
Extremely High:	EH		A piece of core 150 mm long x 50mm dia. is very difficult to break with hand-held hammer. Rings when struck with a hammer.

### ROCK STRENGTH

ABBREVIATION	DESCRIPTION	NOTES
Be	Bedding Plane Parting	Defect orientations measured relative to the normal to (i.e. relative to horizontal for vertical holes)
CS	Clay Seam	
J	Joint	
P	Planar	
Un	Undulating	
S	Smooth	
R	Rough	
IS	Iron stained	
XWS	Extremely Weathered Seam	
Cr	Crushed Seam	
60t	Thickness of defect in millimetres	

## **Appendix B: Laboratory Report and COC Documents**



**CERTIFICATE OF ANALYSIS**

**121960**

**Client:**

**Environmental Investigation Services**

PO Box 976

North Ryde BC

NSW 1670

**Attention:** Vittal Boggaram

**Sample log in details:**

Your Reference:

**E28042KB, Marrickville**

No. of samples:

18 soils

Date samples received / completed instructions received

14/01/15 / 14/01/15

**Analysis Details:**

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

***Please refer to the last page of this report for any comments relating to the results.***

**Report Details:**

Date results requested by: / Issue Date:

22/01/15 / 21/01/15

Date of Preliminary Report:

Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025.

**Tests not covered by NATA are denoted with \*.**

**Results Approved By:**



Jacinta Hurst  
Laboratory Manager

sPOCAS Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	121960-2 BH1 4.7-4.95 05/01/2015 Soil	121960-3 BH1 6.2-6.45 05/01/2015 Soil	121960-4 BH4 1.7-1.95 05/01/2015 Soil	121960-6 BH4 4.2-4.95 05/01/2015 Soil	121960-7 BH7 3.2-3.45 09/01/2015 Soil
Date prepared	-	15/01/2015	15/01/2015	15/01/2015	15/01/2015	15/01/2015
Date analysed	-	15/01/2015	15/01/2015	15/01/2015	15/01/2015	15/01/2015
pH <sub>kd</sub>	pH units	4.8	5.6	5.6	6.6	3.9
TAA pH 6.5	moles H <sup>+</sup> /t	25	15	10	<5	87
s-TAA pH 6.5	%w/w S	0.04	0.02	0.02	<0.01	0.14
pH <sub>α</sub>	pH units	5.4	6.7	4.9	6.2	4.5
TPA pH 6.5	moles H <sup>+</sup> /t	25	<5	25	<5	70
s-TPA pH 6.5	%w/w S	0.04	<0.01	0.04	<0.01	0.11
TSA pH 6.5	moles H <sup>+</sup> /t	<5	<5	15	<5	<5
s-TSA pH 6.5	%w/w S	<0.01	<0.01	0.02	<0.01	<0.01
ANCE	% CaCO <sub>3</sub>	<0.05	0.09	<0.05	<0.05	<0.05
a-ANCE	moles H <sup>+</sup> /t	<5	17	<5	<5	<5
s-ANCE	%w/w S	<0.05	<0.05	<0.05	<0.05	<0.05
SKCl	%w/w S	0.04	0.02	0.006	0.008	0.06
SP	%w/w	0.04	0.02	0.04	0.005	0.06
SPOS	%w/w	<0.005	<0.005	0.03	<0.005	0.005
a-SPOS	moles H <sup>+</sup> /t	<5	<5	21	<5	<5
CaKCl	%w/w	0.009	0.03	0.16	0.03	0.005
CaP	%w/w	0.009	0.03	0.17	0.02	0.006
CaA	%w/w	<0.005	<0.005	0.006	<0.005	<0.005
MgKCl	%w/w	0.063	0.10	0.059	0.066	0.071
MgP	%w/w	0.065	0.11	0.063	0.055	0.074
MgA	%w/w	<0.005	0.005	<0.005	<0.005	<0.005
SHCl	%w/w S	[NT]	[NT]	[NT]	[NT]	0.083
SNAS	%w/w S	[NT]	[NT]	[NT]	[NT]	0.026
a-SNAS	moles H <sup>+</sup> /t	[NT]	[NT]	[NT]	[NT]	12
s-SNAS	%w/w S	[NT]	[NT]	[NT]	[NT]	0.02
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5
a-Net Acidity	moles H <sup>+</sup> /t	26	15	31	<10	100
Liming rate	kg CaCO <sub>3</sub> /t	2.0	1.1	2.4	<0.75	7.7
a-Net Acidity without ANCE	moles H <sup>+</sup> /t	NA	NA	NA	NA	NA
Liming rate without ANCE	kg CaCO <sub>3</sub> /t	NA	NA	NA	NA	NA

sPOCAS Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	121960-9 BH9 1.5-1.95 09/01/2015 Soil	121960-12 BH9 6-6.45 09/01/2015 Soil	121960-16 BH11 1.6-1.8 09/01/2015 Soil	121960-17 BH11 3-3.45 09/01/2015 Soil	121960-18 BH11 4.2-4.4 09/01/2015 Soil
Date prepared	-	15/01/2015	15/01/2015	15/01/2015	15/01/2015	15/01/2015
Date analysed	-	15/01/2015	15/01/2015	15/01/2015	15/01/2015	15/01/2015
pH <sub>KCl</sub>	pH units	6.2	5.0	8.4	6.2	6.4
TAA pH 6.5	moles H <sup>+</sup> /t	5	12	<5	5	<5
s-TAA pH 6.5	%w/w S	<0.01	0.02	<0.01	<0.01	<0.01
pH <sub>Ca</sub>	pH units	5.8	5.7	7.8	4.0	4.5
TPA pH 6.5	moles H <sup>+</sup> /t	<5	7	<5	32	20
s-TPA pH 6.5	%w/w S	<0.01	0.01	<0.01	0.05	0.03
TSA pH 6.5	moles H <sup>+</sup> /t	<5	<5	<5	27	17
s-TSA pH 6.5	%w/w S	<0.01	<0.01	<0.01	0.04	0.03
ANCE	% CaCO <sub>3</sub>	<0.05	<0.05	0.92	<0.05	<0.05
a-ANCE	moles H <sup>+</sup> /t	<5	<5	180	<5	<5
s-ANCE	%w/w S	<0.05	<0.05	0.29	<0.05	<0.05
SKCl	%w/w S	0.01	0.01	0.01	0.01	0.01
SP	% w/w	0.02	0.01	0.01	0.16	0.07
SPOS	% w/w	0.005	<0.005	<0.005	0.15	0.06
a-SPOS	moles H <sup>+</sup> /t	<5	<5	<5	92	36
CaKCl	% w/w	0.14	0.03	0.44	0.27	0.13
CaP	% w/w	0.15	0.03	0.56	0.28	0.13
CaA	% w/w	0.007	<0.005	0.11	0.013	<0.005
MgKCl	% w/w	0.024	0.12	<0.005	0.028	0.047
MgP	% w/w	0.027	0.12	0.021	0.030	0.048
MgA	% w/w	<0.005	0.005	0.017	<0.005	<0.005
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5
a-Net Acidity	moles H <sup>+</sup> /t	<10	13	<10	97	38
Liming rate	kg CaCO <sub>3</sub> /t	<0.75	1.0	<0.75	7.3	2.9
a-Net Acidity without ANCE	moles H <sup>+</sup> /t	NA	NA	<10	NA	NA
Liming rate without ANCE	kg CaCO <sub>3</sub> /t	NA	NA	<0.75	NA	NA

Method ID	Methodology Summary
Inorg-064	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sPOCAS						Base    Duplicate    %RPD		
Date prepared	-			15/01/2015	121960-2	15/01/2015    15/01/2015	LCS-1	15/01/2015
Date analysed	-			15/01/2015	121960-2	15/01/2015    15/01/2015	LCS-1	15/01/2015
pH <sub>kcl</sub>	pH units		Inorg-064	[NT]	121960-2	4.8    4.8    RPD: 0	LCS-1	90%
TAA pH 6.5	moles H <sup>+</sup> /t	5	Inorg-064	<5	121960-2	25    27    RPD: 8	LCS-1	129%
s-TAA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	121960-2	0.04    0.04    RPD: 0	[NR]	[NR]
pH <sub>α</sub>	pH units		Inorg-064	[NT]	121960-2	5.4    5.4    RPD: 0	LCS-1	101%
TPA pH 6.5	moles H <sup>+</sup> /t	5	Inorg-064	<5	121960-2	25    25    RPD: 0	LCS-1	95%
s-TPA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	121960-2	0.04    0.04    RPD: 0	[NR]	[NR]
TSA pH 6.5	moles H <sup>+</sup> /t	5	Inorg-064	<5	121960-2	<5    <5	LCS-1	93%
s-TSA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	121960-2	<0.01    <0.01	[NR]	[NR]
ANCE	% CaCO <sub>3</sub>	0.05	Inorg-064	<0.05	121960-2	<0.05    <0.05	[NR]	[NR]
a-ANCE	moles H <sup>+</sup> /t	5	Inorg-064	<5	121960-2	<5    <5	[NR]	[NR]
s-ANCE	%w/w S	0.05	Inorg-064	<0.05	121960-2	<0.05    <0.05	[NR]	[NR]
SKCl	%w/w S	0.005	Inorg-064	<0.005	121960-2	0.04    0.04    RPD: 0	LCS-1	114%
SP	%w/w	0.005	Inorg-064	<0.005	121960-2	0.04    0.04    RPD: 0	LCS-1	94%
SPOS	%w/w	0.005	Inorg-064	<0.005	121960-2	<0.005    <0.005	LCS-1	88%
a-SPOS	moles H <sup>+</sup> /t	5	Inorg-064	<5	121960-2	<5    <5	LCS-1	89%
CaKCl	%w/w	0.005	Inorg-064	<0.005	121960-2	0.009    0.009    RPD: 0	LCS-1	102%
CaP	%w/w	0.005	Inorg-064	<0.005	121960-2	0.009    0.01    RPD: 11	[NR]	[NR]
CaA	%w/w	0.005	Inorg-064	<0.005	121960-2	<0.005    <0.005	[NR]	[NR]
MgKCl	%w/w	0.005	Inorg-064	<0.005	121960-2	0.063    0.063    RPD: 0	LCS-1	99%
MgP	%w/w	0.005	Inorg-064	<0.005	121960-2	0.065    0.066    RPD: 2	[NR]	[NR]
MgA	%w/w	0.005	Inorg-064	<0.005	121960-2	<0.005    <0.005	[NR]	[NR]
SHCl	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
SNAS	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
a-SNAS	moles H <sup>+</sup> /t	5	Inorg-064	<5	[NT]	[NT]	[NR]	[NR]
s-SNAS	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NR]	[NR]
Fineness Factor	-	1.5	Inorg-064	<1.5	121960-2	1.5    1.5    RPD: 0	[NR]	[NR]
a-Net Acidity	moles H <sup>+</sup> /t	10	Inorg-064	<10	121960-2	26    28    RPD: 7	LCS-1	90%
Liming rate	kg CaCO <sub>3</sub> /t	0.75	Inorg-064	<0.75	121960-2	2.0    2.1    RPD: 5	LCS-1	89%

**Client Reference: E28042KB, Marrickville**

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sPOCAS						Base II Duplicate II %RPD		
a-Net Acidity without ANCE	moles H <sup>+</sup> /t	10	Inorg-064	<10	121960-2	NA    NA	[NR]	[NR]
Liming rate without ANCE	kg CaCO <sub>3</sub> /t	0.75	Inorg-064	<0.75	121960-2	NA    NA	[NR]	[NR]



**Report Comments:**

Asbestos ID was analysed by Approved Identifier:  
Asbestos ID was authorised by Approved Signatory:

Not applicable for this job  
Not applicable for this job

INS: Insufficient sample for this test  
NA: Test not required  
<: Less than

PQL: Practical Quantitation Limit  
RPD: Relative Percent Difference  
>: Greater than

NT: Not tested  
NA: Test not required  
LCS: Laboratory Control Sample

### **Quality Control Definitions**

**Blank:** This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

**Duplicate:** This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

**Matrix Spike:** A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

**LCS (Laboratory Control Sample):** This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

**Surrogate Spike:** Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

### **Laboratory Acceptance Criteria**

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

**SAMPLE RECEIPT ADVICE**

**Client:**

Environmental Investigation Services  
PO Box 976  
North Ryde BC NSW 1670

ph: 02 9888 5000

Fax: 02 9888 5001

Attention: Vittal Boggaram

**Sample log in details:**

Your reference:

**E28042KB, Marrickville**

Envirolab Reference:

**121960**

Date received:

14/01/15

Date results expected to be reported:

**22/01/15**

Samples received in appropriate condition for analysis:

YES

No. of samples provided

18 soils

Turnaround time requested:

Standard

Temperature on receipt (°C)

3.3

Cooling Method:

Ice

Sampling Date Provided:

YES

**Comments:**

If there is sufficient sample after testing, samples will be held for the following time frames from date of receipt of samples:

Water samples - 1 month

Soil and other solid samples - 2 months

Samples collected in canisters - 1 week. Canisters will then be cleaned.

All other samples are not retained after analysis

If you require samples to be retained for longer periods then retention fees will apply as per our pricelist.

**Contact details:**


Please direct any queries to Aileen Hie or Jacinta Hurst

ph: 02 9910 6200 fax: 02 9910 6201

email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

# SAMPLE AND CHAIN OF CUSTODY FORM

<b>TO:</b> ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	<b>EIS Job Number:</b> E28042KB  <b>Date Results Required:</b> STANDARD  <b>Page:</b> 1 of 1	<b>FROM:</b> ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram
---	--	---

<b>Location:</b> Marrickville, NSW		<b>Sample Preserved in Esky on Ice</b>															
<b>Sampler:</b> RC and DF		<b>Tests Required</b>															
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	sPOCAS	pH (1:5 water)										
5/1/14	1	BH1	3-3.5	P	Silty clay												
	2	↓	4.7-4.95		↓	X											
	3	↓	6.2-6.45		↓	X											
	4	BH4	1.7-1.95		Silty clay	X											
	5	↓	3.2-3.45		↓												
	6	↓	4.7-4.95		↓	X											
9/1/14	7	BH7	3.2-3.45		Silty clay	X											
	8	↓	4.5-4.8		↓												
	9	BH9	1.5-1.95		Silty clay	X											
	10	↓	3-3.45		↓												
	11	↓	4.5-4.95		↓												
	12	↓	6-6.45		↓	X											
	13	BH10	3.3-3.45		Silty clay												
	14	↓	4.5-4.95		↓												
	15	↓	6-6.45		↓												
	16	BH11	1.6-1.8		Fill clay	X											
	17	↓	3-3.45		↓	X											
	18	↓	4.2-4.4	↓	↓	X											
				 Envirolab Services 12 Ashley St Chatswood NSW 2067 Ph: (02) 9910 6200 Job No: 121960 Date Received: 14/1/15 Time Received: 15:30 Received by: SK Temp: Cool/Ambient Cooling: Ice pack Security: Intact/Broken/None													

<b>Remarks (comments/detection limits required):</b>		<b>Sample Containers:</b> G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag	
<b>Relinquished By:</b> Vittal B.S	<b>Date:</b> 14/1/15	<b>Time:</b> 13:00	<b>Received By:</b> Sophie <b>Date:</b> 14/1/15

# APPENDIX C    **CONSULTATION DOCUMENTS**

**From:** [Aaron Olsen](#)  
**To:** ["GeospatialSearch@nntt.gov.au"](mailto:GeospatialSearch@nntt.gov.au)  
**Cc:** [Andrew Crisp](#)  
**Subject:** Search Request for Lot 202 DP 1133999 and Lot 101 DP 1237269 (Our Ref: P0026069)  
**Date:** Tuesday, 25 August 2020 1:17:00 PM  
**Attachments:** [Search Form Request for Search of Tribunal Registers 2020.pdf](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

Good afternoon

Please find attached a search request for the Native Title Tribunal for Lot 202 in DP 1133999 and Lot 101 in DP 1237269 (74 Edinburgh Road, Marrickville).

If you have any questions or need any further information, please let me know.

Kind regards

## AARON OLSEN

HERITAGE ASSISTANT

D +61 2 8233 9957

T +61 2 8233 9900

E [aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)

**SHAPING  
CITIES AND  
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET  
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

This email and any files transmitted are for the intended recipient's use only. It contains information which may be confidential and/or protected by copyright. Any personal information in this email must be handled in accordance with the *Privacy Act 1988 (Cth)*. If you have received this email by mistake, please notify the sender and permanently delete the email. Any confidentiality or copyright is not waived or lost because this email has been sent to you by mistake.



## Request for Search of Tribunal Registers

Search for overlapping interests i.e.: Is there a native title claim, determination or land use agreement over this land?

Please note: the NNTT cannot search over freehold land.

For further information on freehold land: [Click Here](#) (NNTT website)

### 1. Your details

NAME:	Aaron Olsen
POSITION:	Assistant Archaeologist
COMPANY/ORGANISATION:	Urbis
POSTAL ADDRESS:	Level 8, 123 Pitt Street, Sydney, NSW, 2000
TELEPHONE:	
EMAIL:	aolsen@urbis.com.au
YOUR REFERENCE:	P0026069
DATE OF REQUEST:	25/08/2020

### 2. Reason for your request

Are you a party to a native title proceeding?

☐ Yes ☒ No

Please provide Federal Court/Tribunal file number/or application name:

#### OR

Do you need to identify existing- native title interests to comply with the *Native Title Act 1993* (Cth) or other State/Territory legislation?

☒ Yes ☐ No

Please provide brief details of these obligations here:

Archaeological assessment

### 3. Identify the area to be searched

If there is insufficient room below, please send more information on a Word or Excel document.

#### Mining tenure

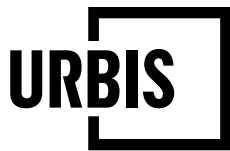
State/Territory: \_\_\_\_\_  
Tenement ref/s: \_\_\_\_\_

#### OR

#### Crown land / non-freehold tenure

Tenure type: ☒ Lease ☐ Reserve or other Crown land  
State/Territory: New South Wales  
Lot and plan details: Lot 202 in DP 1133999 and Lot 101 in DP 1237269  
Pastoral Lease number or name: -  
Other details: (Town/County/Parish/Section/Hundred/Portion): Marrickville/Cumberland/Petersham

Email completed form to: [GeospatialSearch@nntt.gov.au](mailto:GeospatialSearch@nntt.gov.au)



**ANGEL PLACE  
LEVEL 8, 123 PITT STREET  
SYDNEY NSW 2000**

URBIS.COM.AU  
Urbis Pty Ltd  
ABN 50 105 256 228

26 August 2020

To whom it may concern,

## **P0026069 – 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1**

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for Lot 202 in DP 1133999 and Lot 101 in DP 1237269 at 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached figure).

Urbis is preparing an ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under *the National Parks and Wildlife Act 1974* (NPW Act), including *the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

The Proponent can be contacted via:

Thomas Stock  
Regional Development Manager – Non Retail  
Woolworths  
tstock@woolworths.com.au  
PO Box 8000  
Baulkham Hills NSW 2153

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents (DEECW 2010)* (the Consultation Requirements) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, the Proponent will conduct a community consultation process with registered Aboriginal people to assist with the preparation of the ACHA to inform the EIS and comply with the anticipated SEARs requirements including:

- Identifying and describing the Aboriginal cultural heritage values that exist across the subject area in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigations of Aboriginal*

*Objects in NSW OEH* (2010), and documenting these in an Aboriginal Cultural Heritage Assessment Report (ACHAR) which may include the need for surface survey and test excavation;

- Undertaking consultation with Aboriginal people and document in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW);
- The preparation of the ACHAR to support the SSDA, demonstrating attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts; and
- Recording of any Aboriginal objects in line with the requirements of the Aboriginal Heritage Information Management System (AHIMS) that may be identified within the subject area.

In accordance with Section 4.1.2 of the Consultation Requirements, Urbis proposes to compile a list of Aboriginal people and organisations who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places that may exist within the subject area.

Should you be aware of any Aboriginal persons and/or organisations that may hold an interest in the project, please provide their details at your earliest convenience and preferably by **9<sup>th</sup> September 2020** in writing to:

Andrew Crisp  
Senior Consultant  
Urbis  
acrisp@urbis.com.au  
Level 8 123 Pitt Street,  
Sydney, NSW, 2000.

Urbis on behalf of the proponent will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process.

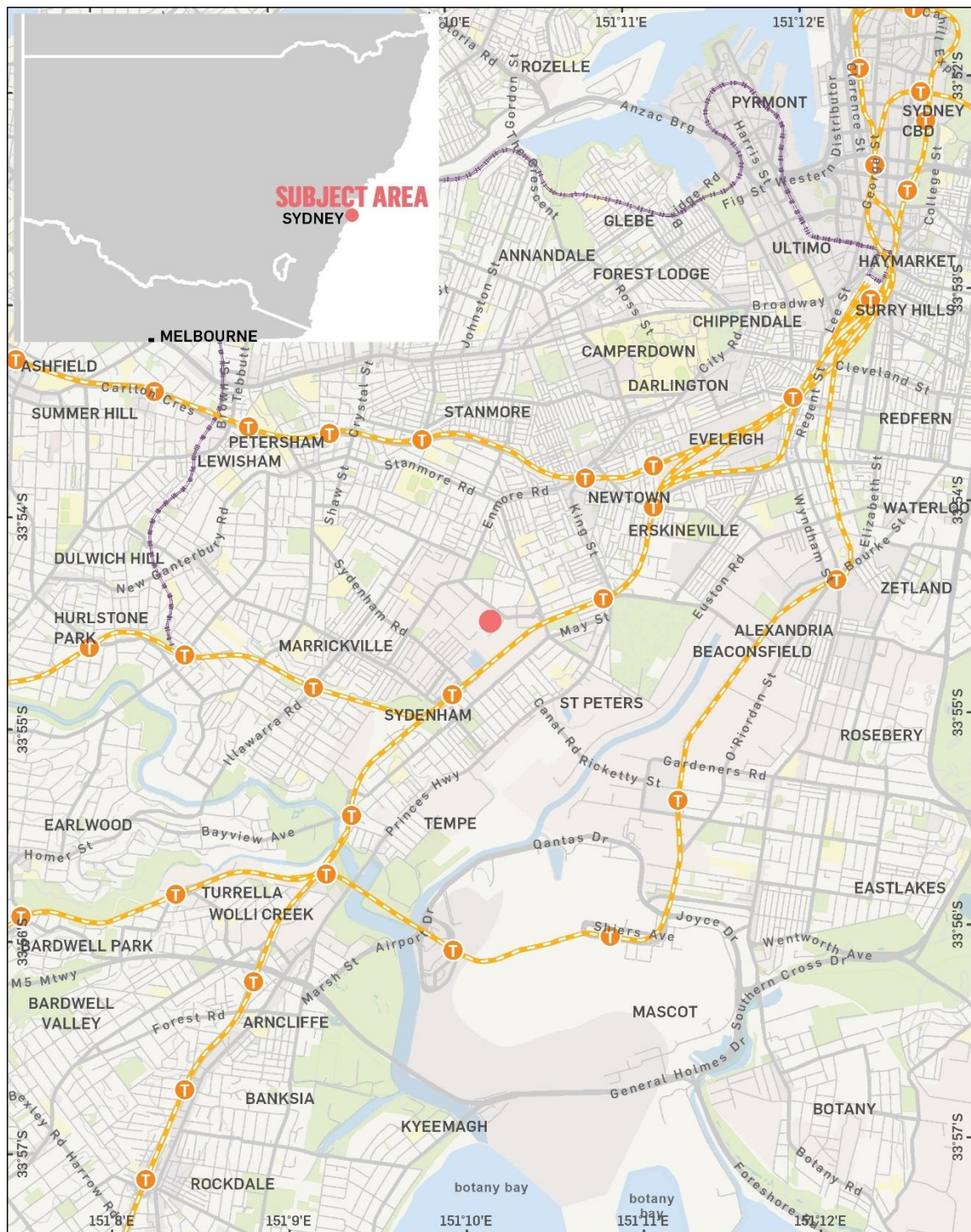
Please be advised that, as per the Consultation Requirements, the Proponent is required to forward the names of Aboriginal persons and groups who register an interest (Registered Aboriginal Parties) to the Metropolitan Local Aboriginal Land Council and Aboriginal Cultural Heritage Regulation Branch of the Department of Premier and Cabinet (DPC) unless the person or group specifies that they do not want their details released.

In the first instance, please contact Andrew Crisp at Urbis with any queries in relation to the provided information.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Andrew Crisp", written over a horizontal line.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
acrisp@urbis.com.au



GDA 1994 MGA Zone 56

1 KM

Project No: P0026069

Project Manager: Andrew Crisp

Subject Area

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**REGIONAL LOCATION**  
74 Edinburgh Road, Marrickville  
Woolworths

Figure 1 – Regional Location of the Subject Area

Our reference: Doc20/697720

Andrew Crisp  
Senior Consultant  
Urbis Level 8 123 Pitt Street  
Sydney, NSW, 2000.

Dear Andrew,

Thank you for your letter dated 26 August 2020 to the Department of Planning, Industry and Environment regarding obtaining a list of the Aboriginal stakeholders that may have an interest in the proposed development at Lot 202 in DP 1133999 and Lot 101 in DP 1237269 at 74 Edinburgh Road, Marrickville, NSW

Please note: on 1 July 2020 the Aboriginal Cultural Heritage Regulation functions under the *National Parks and Wildlife Act 1974* were transferred from the Department of Planning, Industry and Environment into Heritage NSW in the Department of Premier and Cabinet (DPC).

Please find attached the list of Aboriginal stakeholders known to DPC that may have an interest in the project.

As the Planning and Assessment Group in the Department of Planning, Industry and Environment is the approval authority for this project, the consultation process should be in accordance with the relevant guidelines as stipulated by the Group.

If you wish to discuss any of the above matter further please email:  
[heritagemailbox@environment.nsw.gov.au](mailto:heritagemailbox@environment.nsw.gov.au)

Yours sincerely



27 August 2020

**Jackie Taylor**  
**Senior Team Leader**  
**Aboriginal Cultural Heritage Regulation - South**  
**Heritage NSW**



**From:** [Inner West Council](#)  
**To:** [Andrew Crisp](#)  
**Subject:** RE: P0026069 – 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT  
– ABORIGINAL COMMUNITY CONSULTATION STAGE 1  
**Date:** Wednesday, 26 August 2020 11:11:25 AM

---

Thank you for contacting Inner West Council.

Your email has been received and will be referred to the appropriate Service Unit for action.

Meanwhile please visit [www.innerwest.nsw.gov.au](http://www.innerwest.nsw.gov.au) for further information regarding Council activities.

Thank you

Inner West Council

p 02 9392 5000 e [council@innerwest.nsw.gov.au](mailto:council@innerwest.nsw.gov.au)



Council acknowledges the Traditional Custodians of these lands, the Gadigal-Wangal people of the Eora Nation.



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This email has been scanned by Symantec Email Security cloud service on behalf of Inner West Council.

---



01 September 2020

By email: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

Mr Andrew Crisp  
Urbis Pty Ltd  
Level 8, 123 Pitt Street  
Sydney NSW 2000

Dear Andrew,

**Request - Re: Search for Registered Aboriginal Owners**

We refer to your email dated 26 August 2020 seeking the identification of Aboriginal organisations and people who may have an interest in the proposed new warehouse facility with associated infrastructure in Marrickville, New South Wales.

Under Section 170 of the Aboriginal Land Rights Act 1983 the Office of the Registrar is required to maintain the Register of Aboriginal Owners (RAO). A search of the RAO has shown that there are currently no Registered Aboriginal Owners in the project area.

We suggest you contact the Metropolitan Local Aboriginal Land Council on (02) 8394 9666 or via email – [nmoran@metrolalc.org.au](mailto:nmoran@metrolalc.org.au) as they may wish to participate.

Yours sincerely



Rachel Rewiri  
Project Officer  
Office of the Registrar, Aboriginal Land Rights Act 1983



**74 Edinburgh Road, Marrickville, NSW**  
**Aboriginal Cultural Heritage Assessment – Community Consultation Stage 1**

Woolworths Group Limited (the Proponent) are preparing a State Significant Development Application (SSDA) for Lot 202 in DP 1133999 and Lot 101 in DP 1237269 at 74 Edinburgh Road, Marrickville, NSW (hereafter referred as the subject area) which will involve construction of a new warehouse facility with associated infrastructure within the subject area. Urbis is assisting the Proponent in undertaking an Aboriginal Cultural Heritage Assessment (ACHA) to accompany the SSDA. The proponent can be contacted directly via:

Thomas Stock  
Regional Development Manager – Non Retail  
Woolworths Group Limited  
[tstock@woolworths.com.au](mailto:tstock@woolworths.com.au)  
PO Box 8000  
Baulkham Hills NSW 2153

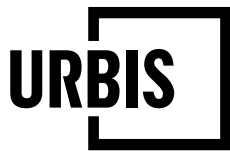
In accordance with Section 4.1.3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)* and Clause 80C of the *NSW National Parks and Wildlife Regulation 2009*, the Proponent is seeking the registration of Aboriginal persons or groups who may hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) that may be present in the subject area.

The purpose of community consultation with Aboriginal people is to assist the Proponent in the preparation of the ACHA, potential test excavation program and the assessment of the cultural heritage significance of the subject area.

Please register your interest in writing to the contact details provided below by 5.00pm **23 September 2020**.

Andrew Crisp  
Senior Consultant  
Urbis Pty Ltd  
[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)  
Level 8 123 Pitt Street,  
Sydney, NSW, 2000.

Please be advised that the Proponent is required to forward the names of Aboriginal persons and groups who register an interest to Metropolitan Local Aboriginal Land Council and Aboriginal Cultural Heritage Regulation Branch of the Department of Premier and Cabinet, unless the person or group specifies that they do not want their details released.



**ANGEL PLACE  
LEVEL 8, 123 PITT STREET  
SYDNEY NSW 2000**

URBIS.COM.AU  
Urbis Pty Ltd  
ABN 50 105 256 228

7 September 2020

To whom it may concern,

## **P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER**

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

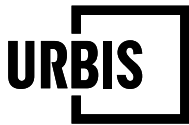
Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under *the National Parks and Wildlife Act 1974* (NPW Act), including *the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

The Proponent can be contacted via:

Thomas Stock  
Regional Development Manager – Non Retail  
Woolworths Group Limited  
tstock@woolworths.com.au  
PO Box 8000  
Baulkham Hills NSW 2153

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010)* (the Consultation Requirements) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, the Proponent will conduct a community consultation process with registered



Aboriginal people to assist with the preparation of the ACHA to inform the EIS and comply with the anticipated SEARs requirements including:

- Identifying and describing the Aboriginal cultural heritage values that exist across the subject area in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* OEH (2010), and documenting these in an Aboriginal Cultural Heritage Assessment Report (ACHAR) which may include the need for surface survey and test excavation;
- Undertaking consultation with Aboriginal people and document in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW);
- The preparation of the ACHAR to support the SSDA, demonstrating attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts; and
- Recording of any Aboriginal objects in line with the requirements of the Aboriginal Heritage Information Management System (AHIMS) that may be identified within the subject area.

In accordance with Section 4.1.2 of the Consultation Requirements, Urbis proposes to compile a list of Aboriginal people and organisations who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places that may exist within the subject area.

Should you be aware of any Aboriginal persons and/or organisations that may hold an interest in the project, please provide their details at your earliest convenience and preferably by **7 October 2020** in writing to:

Andrew Crisp  
Senior Consultant  
Urbis  
acrisp@urbis.com.au  
Level 8 123 Pitt Street,  
Sydney, NSW, 2000.

Please be advised that, as per the Consultation Requirements, the Proponent is required to forward the names of Aboriginal persons and groups who register an interest (Registered Aboriginal Parties) to the Metropolitan Local Aboriginal Land Council and Aboriginal Cultural Heritage Regulation Branch of the Department of Premier and Cabinet (DPC) unless the person or group specifies that they do not want their details released.

Please be advised that in accordance to Section 3.4 of the Consultation Requirements, inclusion in the consultation process does not automatically result in paid site assessment. The decision on who is engaged for delivering particular services is decided by the proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.



In the first instance, please contact Andrew Crisp at Urbis with any queries in relation to the provided information.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Andrew Crisp", written over a thin horizontal line.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
acrisp@urbis.com.au

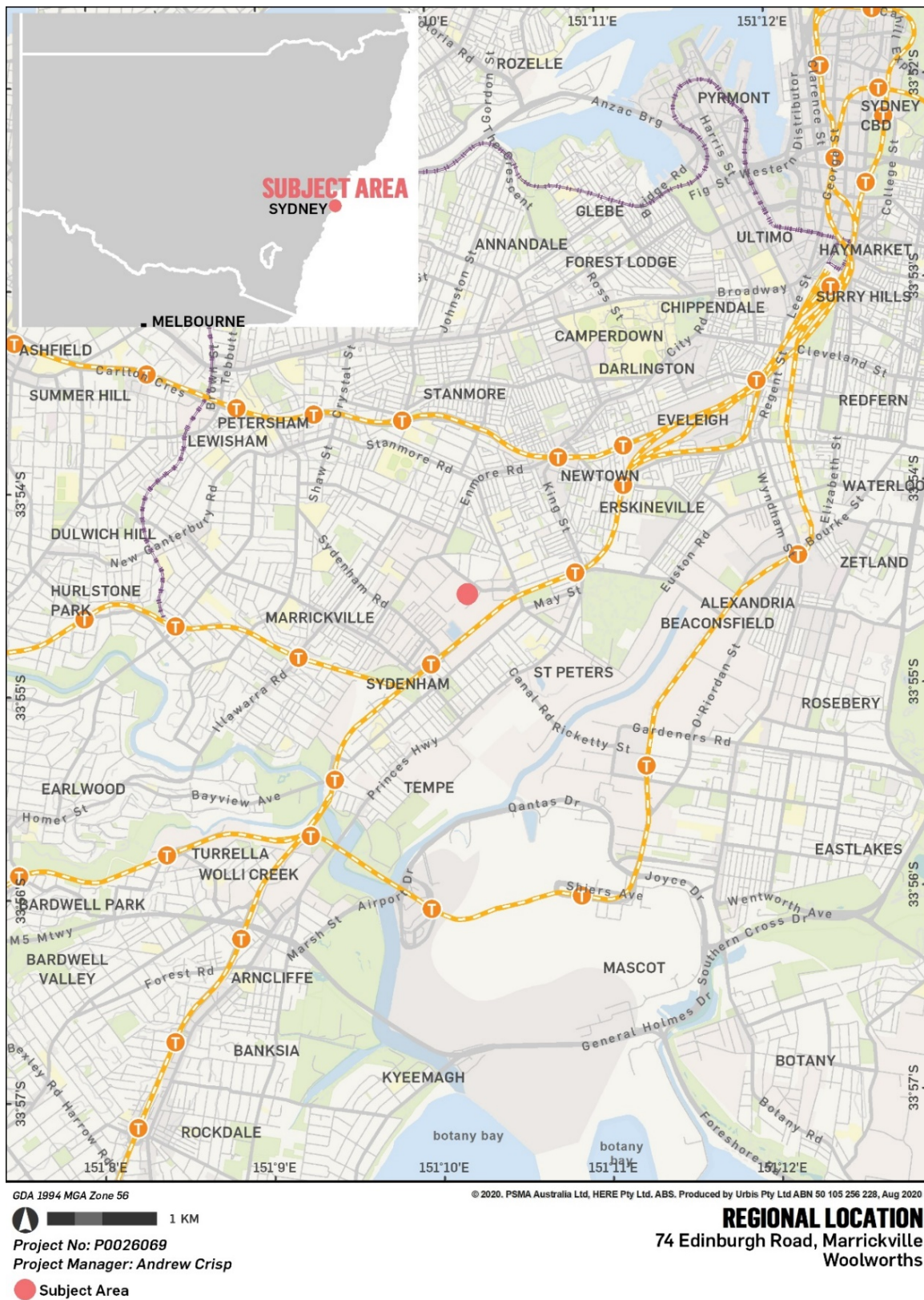


Figure 1 – Regional Location of the Subject Area



**From:** [Carolyn .H](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Monday, 14 September 2020 12:05:09 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---



Hi Aaron,  
I would like to register for consultation and field work, I hold cultural knowledge relevant to determining the cultural significance of any Aboriginal objects and values that exist within the project area.  
Kind Regards,  
Carolyn Hickey

---

**From:** Aaron Olsen <aolsen@urbis.com.au>  
**Sent:** Monday, 7 September 2020 2:22 PM  
**Cc:** Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>  
**Subject:** P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER

Good afternoon

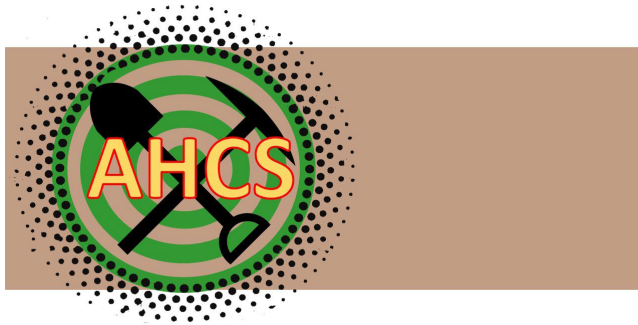
Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from

**From:** [Amanda DeZwart](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Monday, 9 November 2020 9:47:34 AM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---



[REDACTED] mu Plains, NSW 2750

Hi Aaron,

I would like to register my interest in this project and I would like to attend the site visit.

Thank you

Amanda DeZwart

---

**From:** Aaron Olsen <aolsen@urbis.com.au>  
**Sent:** Monday, 7 September 2020 2:22 PM  
**Cc:** Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>  
**Subject:** P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

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# **Barking Owl Aboriginal Corporation**

**ICN: 8822**

**2-65/69 Wehlow St MT DRUITT NSW 2770**

**barkingowlcorp@gmail.com**



**7/09/2020**

**RE: 74 EDINBURGH RD MARRICKVILLE NSW ACHA**

**Dear Andrew,**

We would like to register interest for community consultation and any fieldwork if required.

**Registered Aboriginal Party:                      Barking Owl Aboriginal Corporation**

**Contact Person:**

[REDACTED]

**Contact Phone:**

[REDACTED]

**Contact Email:**

[REDACTED]

The area is an important part of our culture due to previous generations living in and around the area, we maintain a special connection and responsibility as current generations.

We can provide fit and hardworking site officers with current white cards and all PPE equipment.

We can provide copies of relevant certificates of currency of insurances.

Members put forward have experience in a variety of community consultation projects.

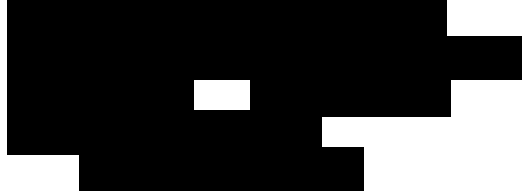
Please feel free to contact by email [REDACTED] if you require any further information.

Kind regards

**Jody Kulakowski  
BOAC**



## BUTUCARBIN ABORIGINAL CORPORATION



7<sup>th</sup> October, 2020

To whom it may concern,

On behalf of Butucarbin, I would like to register interest in the consultation in relation to the project at Edinburgh Road.

Please see information in relation to Butucarbin below.

### **Cultural Connection and Representation**

Butucarbin Aboriginal Corporation is a successful not for profit community organisation that was established in 1989 to provide Community Development, Education and Training to organisations and individuals in the Blacktown and Penrith LGA's of Western Sydney. The organisation has won many awards for outstanding service delivery over the past 23 years. The latest being our Executive Officer Jennifer Beale being a finalist in the 2014 NSW Australian of the Year awards.

Due to the changes in funding, for Aboriginal organisations and for Butucarbin to continue the service that they have been providing, the organisation has developed an Aboriginal Cultural Heritage Assessment business. All profits go back into the organisation to provide services to the community. As community workers we believe it is our duty to involve the Aboriginal community of Western Sydney in this work, as it enables the community to learn about cultural heritage and also enables archaeologists to gain different perspectives into Aboriginal Culture.

Butucarbin in itself is a modern example of cultural heritage in that it is a product of the 1970's resettlement program and self-determination policy (see, Aboriginal Community Controlled Organisations). Due to this resettlement policy there are generations of Aboriginal people who have been born in Western Sydney and have been raised in the Mount Druitt Community (which has the highest Aboriginal urban population in Australia) and thus, this is where their connection lies. Ultimately, our cultural connection lies in our community work and assistance to the people of wider Western Sydney.

In conclusion, we also believe it is essential to pass on knowledge from generation to generation. Butucarbin provides cultural knowledge to the wider community through Aboriginal Cultural workshops and community development programs.

### **Previous experience**

We have participated in projects with such companies as, Extent, Niche, Kelleher Nightingale, Artefact, AMBS, Virtus Heritage, Navin Officer, Curio and Biosis. This work has involved activities such as, site-walkovers, surface collections, ACHA reviews and excavations.

When on site, our workers were on time, professional and participate in all tasks set for them. It is essential for our community members to participate in Aboriginal Community Consultations and other cultural work as we believe it is of the utmost importance that cultural heritage skills and knowledge are passed on to our younger Aboriginal generations.

Overall, our team is highly skilled and has over ten years' experience in cultural heritage assessment field work. Currently, our team consists of several skilled field officers. We ensure there is diversity amongst our workers in that we do not discriminate against gender and age. In fact, we strongly encourage the employment of individuals of all ages and genders as it is essential to gain insight into cultural heritage from varying perspectives.

In the event Butucarbin is selected for fieldwork, please consider our consultancy rates. Ultimately, Butucarbin can negotiate fees however, our standard fee is \$120 per hour. Longer-term projects, those lasting over two months, may be subject to a reduced fee.

[REDACTED]

[REDACTED]

If you require further information, we have attached our flyer and web page [REDACTED] and we are also on Facebook. We would appreciate the opportunity to tender for any Aboriginal cultural heritage assessments you may have coming up in the future. You can contact Jennifer Beale on [REDACTED] or Lowanna Gibson on [REDACTED]

Yours Sincerely,

Lowanna Gibson

**Project Manager for Butucarbin Cultural Heritage and Assessment**

B.A Archaeology/Anthropology USYD

Juris Doctor Candidate UTS

**From:** [lilly.carroll](#)  
**To:** [Aaron Olsen](#)  
**Cc:** [Andrew Crisp](#); [Balazs Hansel](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Monday, 7 September 2020 4:01:02 PM  
**Attachments:** [image006.png](#)  
[image005.png](#)  
[image004.png](#)  
[image003.png](#)  
[image002.png](#)

---

Hi Aaron,

DNC would like to register an interest into 74 Edinburgh Rd Marrickville

Kind regards  
Paul Boyd & Lilly Carroll  
Directors DNC

[Sent from Yahoo Mail for iPhone](#)

On Monday, September 7, 2020, 2:23 pm, Aaron Olsen <aolsen@urbis.com.au> wrote:

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under the National Parks and Wildlife Act 1974 (NPW Act), including the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.



**From:** [Ginninderra Aboriginal Corporation](#)  
**To:** [Aaron Olsen](#)  
**Cc:** [Andrew Crisp](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Tuesday, 15 September 2020 1:45:24 PM

---

Hi Aaron and Andrew,

Thank you for your email. I hope this correspondence finds you well.

Please register Ginninderra Aboriginal Corp for the above mentioned project. We look forward to hearing from you.

*Kind regards,*

Krystle Carroll-Elliott  
Ginninderra Aboriginal Corporation

[REDACTED]  
[REDACTED]

🇺🇸 We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and future

On 7 Sep 2020, at 2:22 pm, Aaron Olsen <[aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)> wrote:

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

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Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under the National Parks and Wildlife Act 1974 (NPW Act), including the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

The Proponent can be contacted via:

**From:** [Gulaga](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Friday, 18 September 2020 7:13:33 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[Aboriginal Cultural Heritage person of interest.docx](#)

---

Hi Aaron

Thank you for the email, Gulaga is most certainly interested in assisting you with this up and coming project. Please see my attached cover letter, hope to hear from you soon

**Kind Regards**  
**Wendy Smith**  
**Cultural Heritage Officer**  
**Gulaga**  


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On Mon, Sep 7, 2020 at 2:23 PM Aaron Olsen <[aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)> wrote:

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under the National Parks and

**From:** [Andrew Crisp](#)  
**To:** [REDACTED]  
**Cc:** [Balazs Hansel](#); [Aaron Olsen](#); [Alexandra Ribeny](#); [Meggan Walker](#)  
**Subject:** P0026069 - 74 Edinburgh Rd, Marrickville - Aboriginal Cultural Heritage Assessment - Stage 1 - Inner West Council ACAC  
**Date:** Thursday, 3 September 2020 1:30:46 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

Good afternoon Deborah,

It was lovely talking to you just now, thank you again for contacting Urbis in regards to the Aboriginal Cultural Heritage Assessment at 74 Edinburgh Rd, Marrickville.

Following on from our conversation my understanding is that Urbis will include the Inner West Council Aboriginal Community Advisory Committee as a Registered Aboriginal Party for the project and Urbis will include The Committee in the project consultation process moving forward. You informed me that you will forward on our consultation documents and correspondence to your contacts in the Aboriginal Community, this is greatly appreciated.

We will include the following details in our records, we are happy to update these based on your review:

Inner West Council Aboriginal Community Advisory Committee  
Contact: Deborah Lennis



Thank you again for the call and we look forward to working closely with you on this project.

Kind regards,

**ANDREW CRISP**

SENIOR CONSULTANT

D +61 2 8233 7642

T +61 2 8233 9900

E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

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ANGEL PLACE, LEVEL 8, 123 PITT STREET  
SYDNEY, NSW 2000, AUSTRALIA

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**From:** [philip.khan](#)  
**To:** [Aaron Olsen](#)  
**Subject:** RE: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Tuesday, 8 September 2020 7:38:14 AM  
**Attachments:** [85D517BD79714BF1BB1ED712A833139C.png](#)  
[171E9A0B65894036ACFDFF99FF6E9192.png](#)  
[09C38E22054747E989D3AB5F10FF08BB.png](#)  
[87D3F18CC3BF4468AAC93B0BB7D32A3.png](#)  
[20CD2C99E2F24A9F811657EB29469CBA.png](#)  
[0E651804733D47E3AEEF4127D42C75D8.png](#)  
[Public Liability Kamilaroi 2020 to 2021 20million cover.pdf](#)  
[Workers Comp Insurance for Kamilaroi Yankuntjatjara Working Group Pty Ltd.pdf](#)

---

Hi Aaron,

Thank you for informing us that **Urbis** will be involved in an Aboriginal Cultural Heritage Assessment **74 Edinburgh Rd, Marrickville** & that you are inviting Aboriginal organisations to register, if they wish too be involved in the community consultation process.

As a senior Aboriginal person for the past 40yrs, I actively participate in the protection of the Aboriginal Cultural Heritage throughout the Sydney Basin, & particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group I wish to provide to you my organisation's registration of interest.

I wish to be involved & participate in all levels of consultation/project involvement. I wish to attend all meetings, participate in available field work & receive a copy of the report.

I have attached a copy of Kamilaroi Yankuntjatjara Working group's Public Liability Insurance & Workers Compensation certificate.

Should you wish me to provide further information, please do not hesitate to contact me on [REDACTED] or Stefanie on [REDACTED].

Kind Regards  
Phil Khan



Sent from [Mail](#) for Windows 10

---

**From:** Aaron Olsen <aolsen@urbis.com.au>  
**Sent:** Monday, September 7, 2020 2:22:51 PM  
**Cc:** Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>  
**Subject:** P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have

**From:** [Andrew Crisp](#)  
**To:** [Aaron Olsen](#)  
**Subject:** FW: registration - 74 Edinburgh Road, Marrickville NSW  
**Date:** Tuesday, 29 September 2020 2:59:44 PM  
**Attachments:** [image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

---

## ANDREW CRISP

SENIOR CONSULTANT

D +61 2 8233 7642

T +61 2 8233 9900

E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

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---

**From:** Shaun Carroll <[Merrigarn@hotmail.com](mailto:Merrigarn@hotmail.com)>  
**Sent:** Wednesday, 9 September 2020 12:36 PM  
**To:** Andrew Crisp <[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)>  
**Subject:** registration - 74 Edinburgh Road, Marrickville NSW

Hi Andrew

Please register Merrigarn for the above project, we would like to be involved in all aspects of the project, I look forward to hearing from you

Kind regards

Shaun Carroll



Sent from [Mail](#) for Windows 10



Metropolitan Local Aboriginal Land Council

Date 10<sup>th</sup> September 2020

Andrew Crisp  
Senior Consultant Urbis  
Level 8 123 Pitt Street, Sydney, NSW, 2000.

Dear Andrew

**RE: Registration of interest for Metropolitan LALC for Aboriginal community consultation**

Thank you for your email to the Metropolitan Local Aboriginal Land Council ("**MLALC**") regarding to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW.

MLALC as a Local Aboriginal Land Council established under NSW Aboriginal Land Rights Act 1983 is the legislated Aboriginal representative body for all Aboriginal people and the Cultural authority for protection & preservation of Aboriginal Culture & Heritage within its prescribed boundaries that includes Sydney CDB, Sydney Harbour, South to Georges River, East of Bankstown and Parramatta, and covers to Hawkesbury River in the north and to Macdonald River in the North West. Please refer to MLALC website for further details on MLALC boundaries.

MLALC on the above basis respectfully requests to be formally registering as a Aboriginal Stakeholder for the proposed project, in order to become a registered Aboriginal party and participate in consultations regarding the significance and management of Aboriginal objects or places that may be impacted by the proposed project.

**Consultation with Land Councils**

The NSW Office of Environment and Heritage ("**OEH**") *Aboriginal Cultural Heritage Consultation requirements for proponents 2010* (the **Consultation Requirements**) apply to all projects requiring an Aboriginal Heritage Impact Permit (AHIP), commencing after the 12 April 2010.

Permits are required where a development or project may impact on an Aboriginal place or Aboriginal objects, including objects which may not yet be identified and recorded on OEH's Aboriginal Heritage Information Management System ("**AHIMS**").

MLALC is under the impression that the OEH *Consultation Requirements*, proponents seeking a permit are required to contact the relevant LALC/s so that relevant 'cultural knowledge holders' can be identified (see section 4.1.2). Where a project crosses more than one LALC boundary, all relevant LALCs must be notified.

*Please note:* In addition to notice to LALCs, the *Consultation Requirements* specifically require proponents to identify whether there are any Native Title holders or Aboriginal Owners registered on the Register of Aboriginal Owners. Where these groups exist, proponents are required to contact these groups directly.

LALCs are the prescribed Aboriginal body whose role is the protection, preservation and promotion of Aboriginal cultural knowledge, sites and areas.



The responsibility of LALCs for the protection and promotion of Aboriginal cultural heritage within our boundaries is recognised by the *Aboriginal Land Rights Act 1983* (NSW). A copy of the boundaries for LALCs in NSW is available from [www.alc.org.au](http://www.alc.org.au).

As the elected representative bodies for all Aboriginal people in NSW, LALCs are also responsible for representing the Aboriginal community, including in relation to culture and heritage matters. The representative role of the LALC extends beyond its membership, to represent the interests of the entire Aboriginal community within a boundary area.

As a result of the culture and heritage role performed and decades of representations of the Aboriginal community on cultural heritage issues, MLALC hold considerable cultural knowledge relevant to the significance of Aboriginal objects and places within the area.

In addition, MLALC also hold cultural knowledge & experience as a result of:

- The LALC's membership, which often includes Traditional Owners or other Aboriginal persons with specific knowledge about particular areas passed on through the generations;
- A history of more than 35 years of providing specialised cultural services and advice to the Government, proponents and the community; and
- Registration of over 4,000 Aboriginal Cultural sites within our boundaries
- LALCs commitment to work with and respect the Traditional Owners of an area. LALCs are often nominated by Elders groups, Traditional Owners or Native Title claimants to speak on their behalf.

And confirming the nominated MLALC representative for this project is Ms Selina Timothy.

Should you need or require any further information & or clarification on this letter please speak with Ms Timothy.

Yours In Unity,

A handwritten signature in dark ink, appearing to read 'N. Moran', with a stylized, wavy line extending from the end.

Nathan Moran  
CEO MLALC

**From:** [Andrew Crisp](#)  
**To:** [Aaron Olsen](#)  
**Subject:** FW: 74 Edinburgh Road, Marrickville NSW  
**Date:** Tuesday, 29 September 2020 2:59:51 PM  
**Attachments:** [image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

---

## ANDREW CRISP

SENIOR CONSULTANT

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E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

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---

**From:** jesse johnson <[muragadi@yahoo.com.au](mailto:muragadi@yahoo.com.au)>

**Sent:** Wednesday, 9 September 2020 12:33 PM

**To:** Andrew Crisp <[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)>

**Subject:** 74 Edinburgh Road, Marrickville NSW

Hi Andrew,

I would like to register an interest in the above project, we have done many projects in the surrounding areas and have been doing Aboriginal Cultural Heritage projects for over 28 years. I look forward to working with you.

Kind regards

Jesse Johnson



**From:** [Andrew Crisp](#)  
**To:** [Aaron Olsen](#)  
**Subject:** FW: 74 Edinburgh Road, Marrickville NSW  
**Date:** Tuesday, 29 September 2020 2:59:59 PM  
**Attachments:** [image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

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**ANDREW CRISP**  
SENIOR CONSULTANT

D +61 2 8233 7642  
T +61 2 8233 9900  
E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

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SYDNEY, NSW 2000, AUSTRALIA

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---

**From:** Darleen Johnson <[murrabidgeemullangari@yahoo.com.au](mailto:murrabidgeemullangari@yahoo.com.au)>  
**Sent:** Wednesday, 9 September 2020 12:30 PM  
**To:** Andrew Crisp <[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)>  
**Subject:** 74 Edinburgh Road, Marrickville NSW

Hi Andrew,  
Please register our interest to be involved in the above project, we have been doing aboriginal cultural heritage projects for over 28 years and have the knowledge of identifying aboriginal objects and or places in the project area.  
Kind regards  
Darleen Johnson  


**From:** [Kaarina Slater](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Tuesday, 22 September 2020 4:19:16 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

On behalf of Ngambaa Cultural Connections I would like to register our expression of interest for the upcoming project.

Kind Regards

Kaarina Slater  


---

**From:** Aaron Olsen <aolsen@urbis.com.au>  
**Sent:** Monday, 7 September 2020 12:22 PM  
**Cc:** Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>  
**Subject:** P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under the National Parks and Wildlife Act 1974 (NPW Act), including the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

The Proponent can be contacted via:

Thomas Stock  
Regional Development Manager – Non Retail  
Woolworths Group Limited  
tstock@woolworths.com.au  
PO Box 8000

**From:** [Thoorga Thoorga](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Monday, 7 September 2020 2:24:41 PM  
**Attachments:** [image003.png](#)  
[image005.png](#)  
[image006.png](#)  
[image002.png](#)  
[image004.png](#)

---

Hi Aaron,

Thank you for the invitation, can you please register my interest in this up coming project?

Regards

John

On Mon, 7 Sep 2020 at 2:23 pm, Aaron Olsen <[aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)> wrote:

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage

consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

**From:** [Phillip Boney](#)  
**To:** [Aaron Olsen](#)  
**Cc:** [Andrew Crisp](#); [Balazs Hansel](#)  
**Subject:** Re: P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER  
**Date:** Friday, 18 September 2020 8:20:50 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

Hi Aaron,

Phil Boney here. I apologise about the late response for this project I must have missed it in my emails. I do apologise, however if I am permitted I would like to register for this project.

Regards, Phil Boney  
Wailwan Aboriginal Group

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---

**From:** Aaron Olsen <aolsen@urbis.com.au>  
**Sent:** Monday, September 7, 2020 2:22:51 PM  
**Cc:** Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>  
**Subject:** P0026069 - 74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1 – INVITATION TO REGISTER

Good afternoon

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) (hereafter referred as the Consultation Requirements) as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Urbis has been commissioned by Woolworths Group Limited (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 74 Edinburgh Road, Marrickville, NSW (hereafter referred to as 'the subject area') (see attached Figure 1).

Urbis is preparing the ACHA to accompany the State Significant Development Application (SSDA) for a new warehouse facility with associated infrastructure within the subject area. The works will comprise demolition of the existing buildings, associated structures and landscaping, construction of a two-storey warehouse, associated offices, two-storey car park adjacent to Edinburgh Road, two-storey hardstand loading and delivery area adjacent Sydney Steel Road, private vehicle access from two points on Edinburgh Road and heavy vehicle/loading vehicle access from four points on Sydney Steel Road.

The ACHA is to be carried out in accordance with relevant guidelines under the National Parks and Wildlife Act 1974 (NPW Act), including the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

The Proponent can be contacted via:

Thomas Stock



**From:** [Andrew Crisp](#)  
**To:** [Aaron Olsen](#)  
**Subject:** FW: P0026069 -74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1–INVITATION TO REGISTER  
**Date:** Tuesday, 29 September 2020 2:59:24 PM  
**Attachments:** [image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

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## ANDREW CRISP

SENIOR CONSULTANT

D +61 2 8233 7642

T +61 2 8233 9900

E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

**SHAPING  
CITIES AND  
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET  
SYDNEY, NSW 2000, AUSTRALIA

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**From:** WIDESCOPE . <[widescope.group@live.com](mailto:widescope.group@live.com)>  
**Sent:** Wednesday, 16 September 2020 11:50 AM  
**To:** Andrew Crisp <[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)>  
**Subject:** P0026069 -74 EDINBURGH ROAD, MARRICKVILLE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1–INVITATION TO REGISTER

Hi,

My name is Steven Hickey

Please register my interest in the Aboriginal Cultural heritage assessment for P0026069 -74 EDINBURGH ROAD, MARRICKVILLE project

I am a recognised indigenous cultural knowledge holder. I hold cultural knowledge relevant in

determining the significance of Aboriginal objects and places in the vicinity of the study area. I hold a cultural connection to the area of the project and surrounding areas

My preferred Method of contact is Via E [REDACTED]  
Or Steven Hickey (RAP) Mob [REDACTED]  
Donna Hickey Administration [REDACTED]

My level of involvement:

I would like to attend Community Consultation meetings and to be considered for any future field survey works. I am fit and skilled in all aspects of cultural surveying works.

Thank you for your consideration, I look forward to assisting the team with the Aboriginal Cultural Heritage section of the project.

I do not require any hard copies of reports.

Privacy: Please do not release my personal details including my Email address to other RAP including group emails

I give consent to Local Aboriginal Land Council and Heritage NSW thank you.

Regards  
Steven Hickey

14 October 2020

Heritage NSW  
Department of Premier and Cabinet  
Locked Bag 5020  
Parramatta NSW 2124  
[heritagemailbox@environment.nsw.gov.au](mailto:heritagemailbox@environment.nsw.gov.au)

To whom it may concern,

## **STAGE 1.6 - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – 74 EDINBURGH ROAD, MARRICKVILLE – LIST OF REGISTERED ABORIGINAL PARTIES AND NOTIFICATION LETTER**

In accordance with Section 4.1.6 of the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW, 2010) please find below the compiled list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the abovementioned project.

Table 1 – List of Registered Aboriginal Parties

<b>Name</b>	<b>Contact</b>	<b>Updated</b>
Metropolitan Local Aboriginal Land Council	Selina Timothy	N
Inner West Council Aboriginal Community Advisory Committee	Deborah Lennis	N
A1 Indigenous Services	Carolyn Hickey	N
Barking Owl Aboriginal Corporation	Jody Kulakowski	N
Butucarbin Aboriginal Corporation	Lowanna Gibson	N
Didge Ngunawal Clan	Lilly Carroll & Paul Boyd	N
Ginninderra Aboriginal Corporation	Steven Johnson & Krystle Carroll	N
Gulaga	Wendy Smith	N
Kamilaroi Yankuntjatjara Working Group	Phil Khan	N



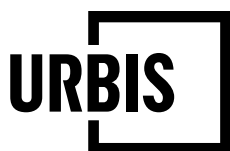
Merrigarn	Shaun Carroll	N
Muragadi Heritage Indigenous Corporation	Jesse Johnson	N
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson & Darleen Johnson	N
Ngambaa Cultural Connections	Kaarina Slater	N
Thoorga Nura	John Carriage	N
Wailwan Aboriginal Group	Philip Boney	N
Widescope Indigenous Group	Steven Hickey & Donna Hickey	N

Please do not hesitate to contact us should you have any queries in relation to the provided information.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Crisp", with a horizontal line underneath.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
acrisp@urbis.com.au



**ANGEL PLACE  
LEVEL 8, 123 PITT STREET  
SYDNEY NSW 2000**

URBIS.COM.AU  
Urbis Pty Ltd  
ABN 50 105 256 228

14 October 2020

Nathan Moran  
Metropolitan Local Aboriginal Land Council  
PO Box 1103  
Strawberry Hills NSW 2012  
[officeadmin@metrolalc.org.au](mailto:officeadmin@metrolalc.org.au)

Dear Mr. Moran,

## **STAGE 1.6 - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – 74 EDINBURGH ROAD, MARRICKVILLE – LIST OF REGISTERED ABORIGINAL PARTIES AND NOTIFICATION LETTER**

In accordance with Section 4.1.6 of the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW, 2010) please find below the compiled list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the abovementioned project.

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Kamilaroi Yankuntjatjara Working Group	Phil Khan	N



Merrigarn	Shaun Carroll	N
Muragadi Heritage Indigenous Corporation	Jesse Johnson	N
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson & Darleen Johnson	N
Ngambaa Cultural Connections	Kaarina Slater	N
Thoorga Nura	John Carriage	N
Wailwan Aboriginal Group	Philip Boney	N
Widescope Indigenous Group	Steven Hickey & Donna Hickey	N

Please do not hesitate to contact us should you have any queries in relation to the provided information.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Andrew Crisp". The signature is fluid and cursive, with a horizontal line drawn underneath the name.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
acrisp@urbis.com.au



12 October 2020

To whom it may concern,

## **RE: ABORIGINAL CULTURAL HERITAGE ASSESSMENT 74-EDINBURGH ROAD, MARRICKVILLE – ABORIGINAL COMMUNITY CONSULTATION STAGE 2 PRESENTATION OF INFORMATION & STAGE 3 GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE**

Thank you for registering your interest in the Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville (hereafter referred to as 'the subject area').

In accordance with Section 4.2 and 4.3 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010) (hereafter referred to as the Consultation Requirements), please find this document as a summary of information on the proposed development and the protocol for providing cultural heritage information during the ACHA. Please note that more detailed information will be provided in due course and as part of the developing ACHA.

### **1 LOCATION OF DEVELOPMENT**

The subject area is within the Inner West Council Local Government Area (LGA) and covers approximately 27,315 sqm. It has frontages to both Edinburgh Road (north-east) and Sydney Steel Road (south-east) and is within an established industrial area in the Sydenham Station Precinct, part of the Sydenham to Bankstown Urban Renewal Corridor. It is bordered by other industrial lots to the north-west and south-west, with residential lots and commercial development across Edinburgh Road to the north-east. On the opposite side of Sydney Steel Road, is the 'Marrickville Dive Site' for the Sydney Metro City & Southwest Chatswood to Sydenham project (SSI 7400).

### **2 DESCRIPTION OF THE DEVELOPMENT**

The proposed works include demolition of the existing buildings, associated structures and landscaping; construction of a two storey warehouse comprising a speculative warehouse at level 1 (ground level) and Customer Fulfillment Centre (CFC) at level 2; construction of associated offices across five levels to be used by Woolworths in conjunction with the warehouse and CFC; a two storey car park adjacent to Edinburgh Road; a two storey hardstand loading and delivery area adjacent Sydney Steel Road; private vehicle access from two points on Edinburgh Road; heavy vehicle / loading vehicle access from four points on Sydney Steel Road; and tree removal and landscaping works.

Use of the warehouse will be on a 24-hour, 7-day basis, consistent with surrounding operations.

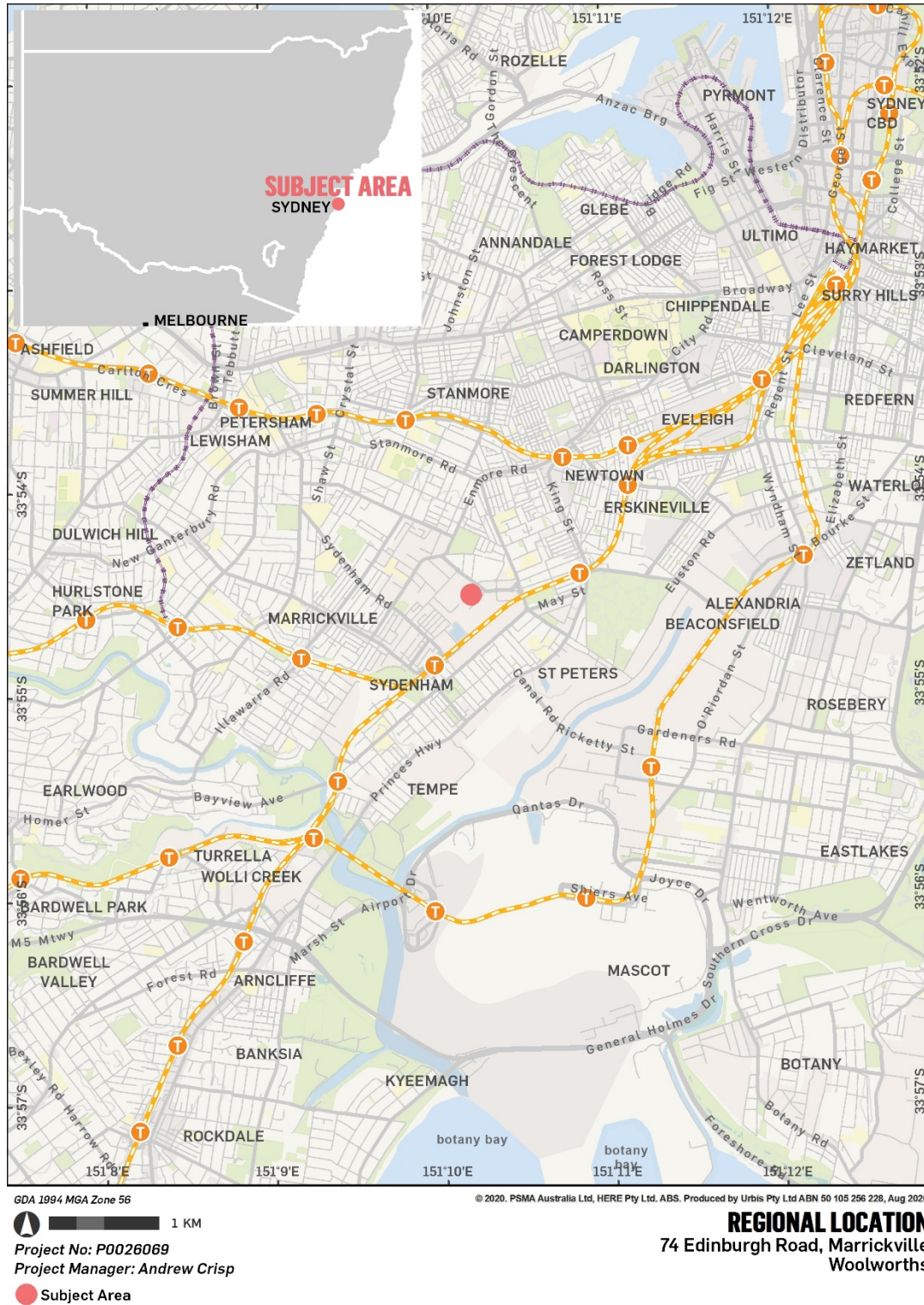


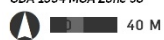
Figure 1 - Regional location





GDA 1994 MGA Zone 56

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Project No: P0026069

Project Manager: Andrew Crisp

■ Subject Area   
 ■ Contours   
 ■ Hydrology   
 --- Ephemeral

**SUBJECT AREA**  
 74 Edinburgh Road, Marrickville  
 Woolworths

Figure 2 – Location of the subject area





Figure 3 – Proposed Development  
Source: Nettleton Tribe

### 3 ARCHAEOLOGICAL BACKGROUND INFORMATION

This section comprises the summary of the archaeological background research completed to date for Aboriginal cultural heritage resources including the search of the Aboriginal Heritage Information Management System (AHIMS) and additional archaeological background information.

#### 3.1 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

The AHIMS database comprises previously registered Aboriginal archaeological objects and cultural heritage places in NSW and it is managed by the Department of Planning, Industry and Environment (DPIE) under Section 90Q of the *National Parks and Wildlife Act 1974* (NPW Act).

An extensive search of the AHIMS database was carried out on the 11<sup>th</sup> August 2020 (AHIMS Client Service ID: 526644) for an area of approximately 10 km<sup>2</sup>. The basic and extensive AHIMS search results are included in Appendix 1. A summary of all previously registered Aboriginal sites within the extensive search area is provided in Figure 4 and the spatial distribution of the sites is shown in Figure 5.

Aboriginal objects are the official terminology in AHIMS for Aboriginal archaeological sites. Henceforth, we will use the term of 'Aboriginal site(s)', 'AHIMS site(s)', 'archaeological site(s)' or 'sites' to refer and to describe the nature and spatial distribution of archaeological resources in relation to the subject area.

The AHIMS search identified no Aboriginal sites or Aboriginal places within, or in close proximity to, the subject area.

The nearest registered Aboriginal site to the subject area is AHIMS ID# 45-6-2654 (Figure 5). It is located in Fraser Park, approximately 900m south-west of the subject area. Fraser Park is adjacent to the same tributary of the Cooks River as the present subject area is located. There is no available site card for AHIMS ID# 45-6-2654, but it is identified as a Potential Archaeological Deposit (PAD) in the AHIMS search results. A Permit to Carry Out Preliminary Research was issued for the site under s. 87(1) NPW Act 1974 (Permit #1639) to conduct small test excavations. Those excavations are described in McIntyre-Tamwoy (2003), which identifies the site as a shell deposit and potential midden. The excavation report concluded that the shell deposit is natural and therefore not a midden. The report recommends that the shell deposit be recorded in AHIMS as 'not a site'.

In the broader Extensive AHIMS search area a total of 70 Aboriginal sites are registered. In addition to AHIMS ID# 45-6-2654, four additional search results were subsequently identified as 'not a site' and two were identified as a 'duplicate'. These have been excluded from the analysis, reducing the number of sites in the extensive search area to 63 (see Figure 4).

Identified sites in the extensive search area include both open context and closed context sites, consistent with the varied landforms across the search area. The most common site types identified in the search are potential archaeological deposits (PADs), which represent 33% (n=21) of search results, and artefact scatters, which represent 14% (n=9) of search results. The high proportion of PADs is consistent with an urban environment, in which early development occurred on top of areas that may have been previously utilised by Aboriginal people. The relatively low to moderate ground disturbance associated with such early development may have acted to preserve underlying archaeological deposits. The densities of the artefact scatters vary from small scatters of as few as two objects to large scatters of hundreds of objects. Spatially, objects within the search area tend to be located primarily within proximity of waterways, especially Wolli Creek and the Cooks River, which are the major waterways in the area.

These results reflect an environment in which confirmed sites are mostly occurring as surface artefacts exposures and reinforces the generic predictive model for the Cumberland Plain, which suggests that Aboriginal objects are anticipated to occur in higher frequency and density within 200m of high order streams. Artefact scatters are also anticipated within 200m of lower order streams, but these are generally low density, background scatters and generally reflective of less prolonged, transitional use of the landscape.

It should be noted that the AHIMS register does not represent a comprehensive list of all Aboriginal objects or sites in a specified area as it lists recorded sites only identified during previous archaeological survey effort. The wider surroundings of the subject area and in general the Cumberland Plain area have been the subject of various levels and intensity of archaeological investigations during the last few decades. Most of the registered sites have been identified through targeted, pre-development surveys for infrastructure and maintenance works, with the restrictions on extent and scope of those developments.

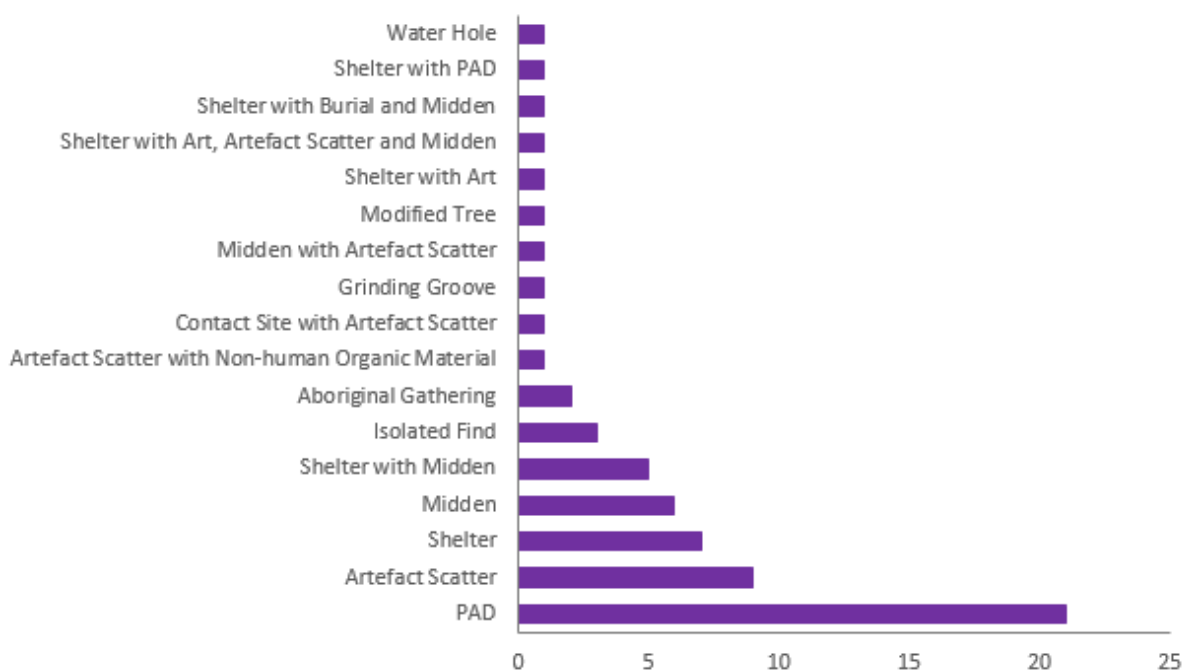


Figure 4 – Graph showing the results of AHIMS Search for Client Service ID: 526644

Table 1 – AHIMS search results (Client Service ID: 526644)

Site Type	Context	Number	Percentage
PAD	Open	21	33%
Artefact Scatter	Open	9	14%
Shelter	Closed	7	11%
Midden	Open	6	10%
Shelter with Midden	Closed	5	8%
Isolated Find	Open	3	5%
Aboriginal Gathering	Open	2	3%
Artefact Scatter with Non-human Organic Material	Open	1	2%
Contact Site with Artefact Scatter	Open	1	2%
Grinding Groove	Open	1	2%
Midden with Artefact Scatter	Open	1	2%
Modified Tree	Open	1	2%
Shelter with Art	Closed	1	2%
Shelter with Art, Artefact Scatter and Midden	Closed	1	2%
Shelter with Burial and Midden	Closed	1	2%
Shelter with PAD	Closed	1	2%
Water Hole	Open	1	2%
<b>Total</b>		63	100%



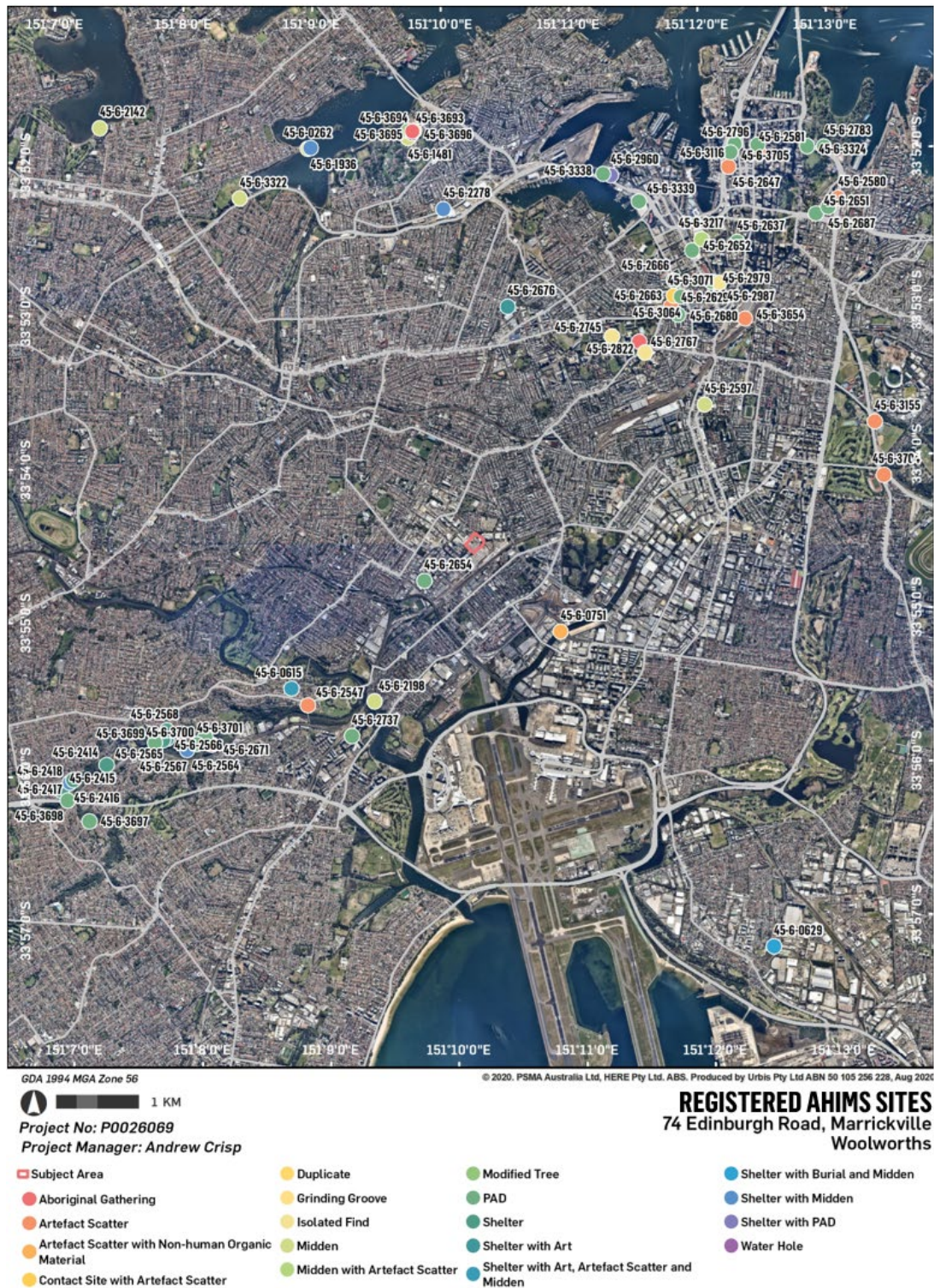


Figure 5 – Registered AHIMS Sites

## **4 CURRENT ENVIRONMENT**

### **4.1 TOPOGRAPHY**

The present subject area is generally flat. The flat landform element is neither a crest nor a depression, with only a slight incline in a south-westerly direction in the case of the present subject area. This landform element is not associated with a high potential for Aboriginal objects.

### **4.2 GEOLOGY AND SOILS**

The subject area is located within the Sydney Basin bioregion and entirely within the Birrong Soil Landscape (bg), although in close proximity to the Blacktown Soil Landscape (bt) (Figure 6).

The Birrong Soil Landscape is described as residing on level to gently undulating alluvial floodplain draining Wianamatta Group shales. Soils are described as deep (>250 cm) Yellow Podzolic Soils (Dy2.42, Dy3.12) and Yellow Solodic Soils (Dy3.42) on older alluvial terraces, or deep (>250 cm) Solodic Soils (Dy3.42) and Yellow Solonetz (Dy3.43) on current floodplains. Dominant soil materials include dark brown pedal silty clay loam, bleached hard setting clay loam, orange mottled silty clay, brown mottled clay, and light grey mottled saline clay.

The lower slopes of Blacktown soil landscape (bt) adjoin and occasionally overlap the Birrong soil landscape. The Blacktown Soil Landscape is described as residing upon gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Soils are described as shallow to moderately deep (<100 cm) Red and Brown Podzolic Soils (Dr3.21, Dr3.11, Db2.11) on crests, upper slopes and well-drained areas; deep (150-300 cm) Yellow Podzolic Soils and Soloths (Dy2.11, Dy3.11) on lower slopes and in areas of poor drainage. Dominant soil materials include friable brownish-black loam, hard setting brown clay loam, strongly pedal mottled brown light clay, and light grey plastic mottled clays.

The Birrong Soil Landscape is prone to localised flooding and seasonal waterlogging. It is likely that the subject area was part of the Gumbramorra Swamp, which once occupied the Marrickville valley (Meader 2008). However, given its proximity to the Blacktown Soil Landscape and the fluctuation in size of the Gumbramorra Swamp (Meader 2008), the subject area was probably at its margins.

The depth of natural soils is relevant to the potential for archaeological materials to be present, especially in areas where disturbance is high. In general, as disturbance level increases, the integrity of any potential archaeological resource decreases. However, disturbance might not remove the archaeological potential even if it decreases integrity of the resources substantially. Although located close to the shallow Blacktown Soil Landscape, the relatively deep soils of the Birrong Soil Landscape in which the subject area is located may mitigate the effects of ground disturbance on archaeological potential.

As discussed below, disturbance is determined to be moderate to high across the subject area, resulting from vegetation clearance, historical commercial and industrial activities and the construction of the canal. However, any impact of ground disturbing activities may be restricted to the upper portions of the natural soil profile. It is considered that archaeological potential may remain in sub-surface deposits where the natural soil profile is intact.



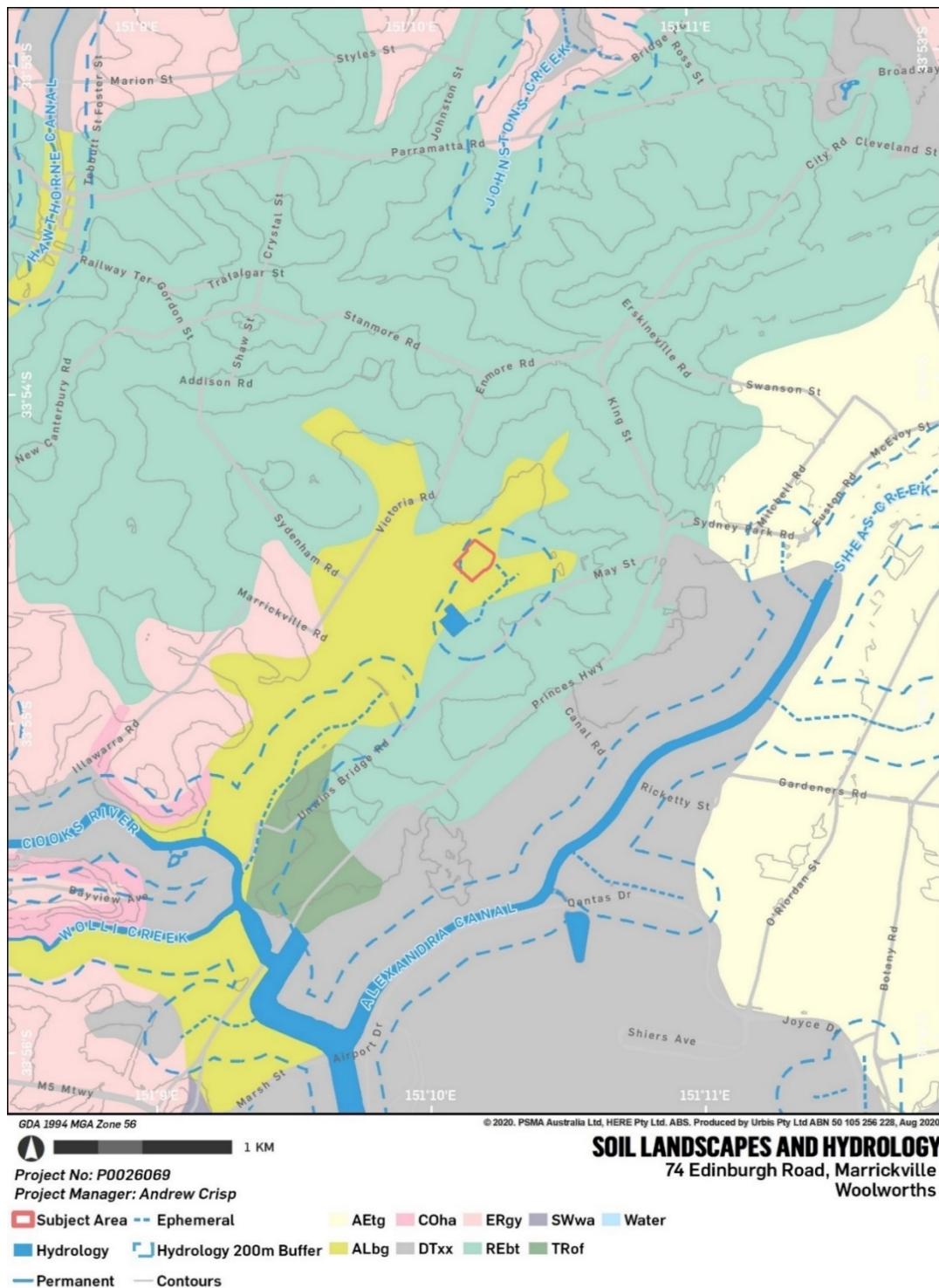


Figure 6 – Soil Landscapes and Hydrology

### 4.3 HYDROLOGY

The subject area lies within 200m of a bifurcated concrete-lined canal running in a south-westerly direction towards the Cooks River, approximately 2km away. The canal flows into the Sydenham Pit and Drainage Pumping Station 1 south-west of the subject area, after which it continues underground for approximately 500m before re-emerging as an aboveground canal for the remainder of the distance to the Cooks River. One arm of the canal runs underneath Lot 101 DP 1237269 of the subject area, which is the linear parcel of land dividing the separate portions of Lot 202 DP 1133999.

As indicated by the 'Plan of Storm Water Drainage Scheme, Marrickville' of 1892 (Figure 7), the canal has replaced a former natural tributary of the Cooks River. The tributary was likely part of the natural drainage system for Gumbramorra Swamp. The arm of the canal running south of Lot 101 DP 1237269 of the subject area follows a northerly diversion of the natural waterway, while the main line of the canal runs to the east of both the natural waterway and the planned drain of Figure 7. The natural waterway appears to have originally marked the southern and eastern boundaries of the present subject area (Figure 7).

From the AHIMS search results and the generic predictive model for the Cumberland Plain, sites can be anticipated to be higher in frequency and density in proximity to waterways. The proximity of the subject area to the confluence of two natural tributaries suggests a moderate to high potential for finding Aboriginal objects in the subject area.

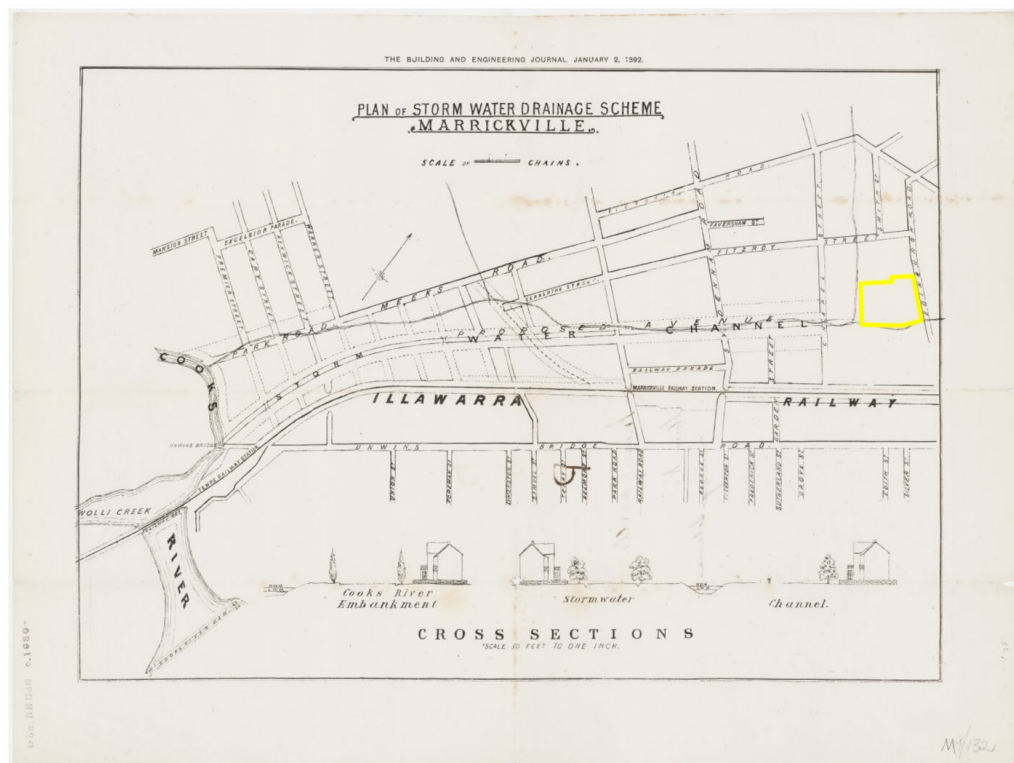


Figure 7 – 'Plan of Storm Water Drainage Scheme, Marrickville' from 1892 with approximate location of subject area indicated by yellow outline

Source: State Library of NSW

## 4.4 VEGETATION

Although the subject area includes a number of mature trees, there is no remnant vegetation currently present due to historical land clearance. At the time of European settlement, the subject area would likely have been covered in native forest and woodland vegetation consistent with the Birrong soil landscape, including ironbark *Eucalyptus paniculata*, turpentine *Syncarpia glomulifera*, and Sydney blue gum *E. saligna*.

Resources would include a variety of floral and faunal species that may have been utilised by Aboriginal people for medicinal, ceremonial and subsistence purposes.

## 5 REGIONAL ARCHAEOLOGICAL CONTEXT

Aboriginal occupation in the Sydney region encompasses at least 20,000 years, with dates of 13,000 before present (BP) at Shaws Creek in the Blue Mountain foothills, 11,000 BP at Mangrove Creek and Loggers Shelter and c. 20,000 BP at Burrill Lake on the NSW South Coast (Attenbrow 2010). The majority of sites in the Sydney region have been dated to within the last 3,000 to 5,000 years. Many researchers propose that occupation the apparent intensification of occupation during this period may have been influenced by rising sea levels at the end of the Pleistocene epoch (the last 'ice age'), with sea levels reaching current levels by about 6,500 BP. Radiocarbon dating of charcoal samples from sand sheet contexts in proximity to the Cooks River have indicated occupation to the late Pleistocene (JMCHM 2005b). Older occupation sites along the now submerged coastline would have been flooded, with subsequent occupation concentrating and utilising resources along the current coastlines and changing ecological systems in the hinterland and the Cumberland Plain (Attenbrow 2010).

The existing archaeological record is limited to certain materials and objects that were able to withstand degradation and decay. As a result, the most common type of Aboriginal objects remaining in the archaeological record are stone artefacts. Archaeological analyses of these artefacts in their contexts have provided the basis for the interpretation of change in material culture over time. Technologies used for making tools changed, along with preference of raw material. Different types of tools appeared at certain times, for example ground stone hatchets are first observed in the archaeological record around 4,000 BP in the Sydney region (Attenbrow 2010:102). It is argued that these changes in material culture were an indication of changes in social organisation and behaviour.

After 8,500 BP silcrete was more dominant as a raw material and bifacial flaking became the most common technique for tool manufacture. From about 4,000 BP to 1,000 BP backed artefacts appear more frequently. Tool manufacture techniques become more varied and bipolar flaking increases (JMCHM 2006). It has been argued that from 1,400 to 1,000 years before contact there is evidence of a decline in tool manufacture. This reduction may be the result of decreased tool making, an increase in the use of organic materials, changes in the way tools were made, or changes in what types of tools were preferred (Attenbrow 2010). The reduction in evidence coincides with the reduction in frequency of backed blades as a percentage of the assemblage.

The archaeological evidence indicates that Aboriginal people were occupying the region around the subject area well before the arrival of the First Fleet in 1788. In the 1890s, dugong bones were discovered at Shea Creek during the construction of the Alexandra Canal, St Peters, approximately 1.4km south-west of the present subject area (Figure 8 and Figure 9). The bones exhibited transverse and oblique cuts, which have been attributed to butchering by Aboriginal people (Etheridge et al. 1896). The dugong bones have been dated to around 5520±70 BP (Haworth et al. 2004). A shell midden was also found nearby at the St Peters Brickworks Quarry site, a In close proximity to the site of the dugong bone finding, suggesting the area was frequented by Aboriginal people for obtaining food (Moran & Conyers 1983).

After European colonisation, Aboriginal people of the Sydney region continued to manufacture tools, sometimes with new materials such as bottle glass, flint from ship ballast or ceramics. Flaked glass has been recorded at a number of sites across the Sydney region, for example, Prospect (Ngara Consulting 2003) and Ultimo (AHIMS ID# 45-6-2663). Evidence of Aboriginal occupation and resource use continues to exist in some urban sites that contain remnant portions of the original soil profile.

Based on the above background, it is possible that similar evidence of Aboriginal occupation will also be present within original and/or intact topsoils throughout the Sydney urban area, including the region surrounding the present subject area.



Figure 8 – Lower jaw of Dugong with cut marks, discovered at Shea's Creek, St Peters.

Source: Etheridge et al., 1896.

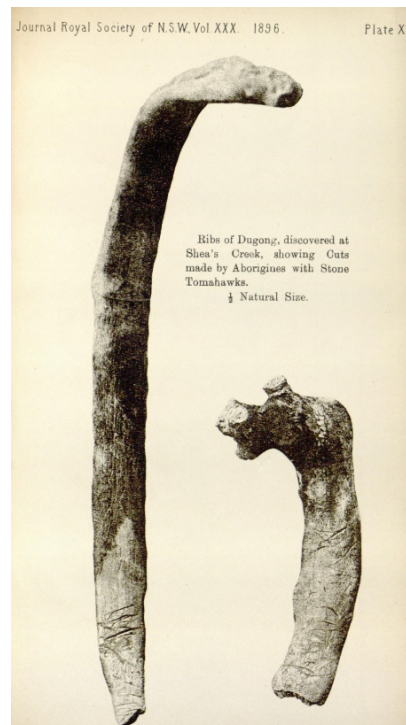


Figure 9 – Ribs of Dugong with cut marks, discovered at Shea's Creek, St Peters.

Source: Etheridge et al., 1896.

## 6 HISTORICAL LAND USE

The entire subject area has been impacted by its historical use as an industrial/commercial site in addition to the construction of the canal to replace the natural waterway. Lot 101 DP 1237269 is considered to have been subjected to high disturbance due to the construction of the canal. Lot 202 DP 1133999 is likely to have experienced moderate to high disturbance, primarily due to the construction of buildings and erosion associated with land clearance and subsequent use of the site prior to laying of the existing concrete slab.

The moderate to high ground disturbance across the subject area does not entirely remove the archaeological potential of the subject area. The paving of the subject area may have served to preserve any underlying archaeological deposits from the impacts of erosion and human land-use. Furthermore, as noted in Section 4.2, the depth of the natural soil profile may mitigate the impacts of ground disturbance, with the potential for sub-surface archaeological deposits to remain.



The above characterisation of disturbance levels within the subject area have been determined through the analysis of historical aerial imagery. Historic aerial images from 1930, 1961, 1994 and 2020 were analysed to develop an understanding of disturbance (see Figure 10) and is included in Table 2.

Table 2 – Analysis of historical aerals

Year	Observation
1930	In 1930, the subject area had already been substantially cleared of vegetation and developed as an industrial/commercial site. Various buildings had been constructed across the subject area. Some open areas remained within the subject area, such as the north-east corner and a courtyard area in the south-east quadrant. The canal running underneath Lot 101 DP 1237269 of the subject area is already built by this time.
1961	By 1961, a number of additional or replacement buildings have been constructed across the subject area. Open areas remain in the north-east corner and a courtyard area in the south-east quadrant.
1994	By 1994, a number of the older buildings have been demolished, with a bare concrete slab remaining in their place. The previously open areas in the north-east corner and a courtyard area in the south-east quadrant have been built upon by this time.
2020	The only changes observed from the previous photography are the demolition of several buildings in the northern quadrant of the subject area and the construction of a new building on the north western boundary.

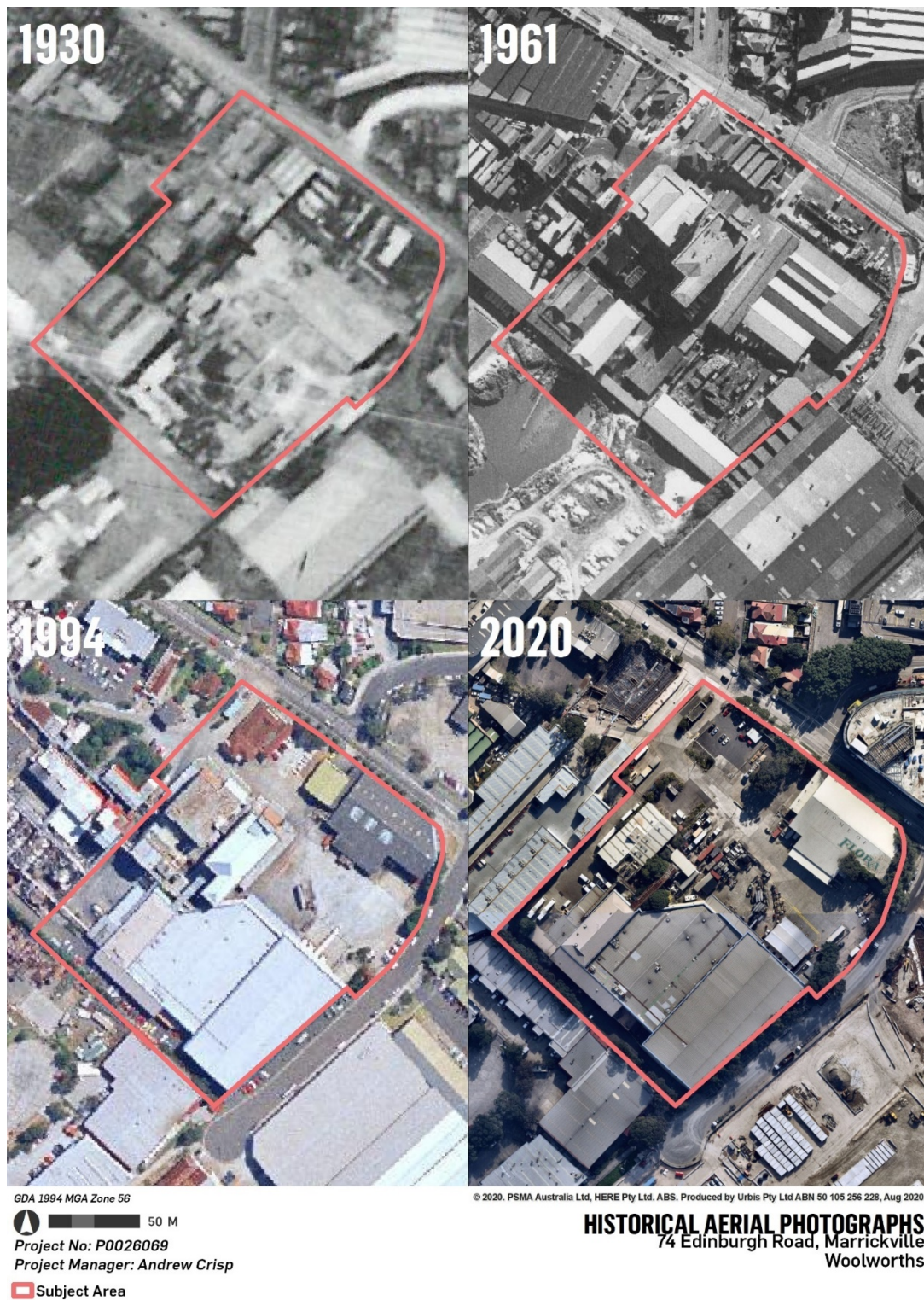


Figure 10 – Historic Aerial Photographs

## 7 PREDICTIVE MODEL

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* requires that an appropriate predictive model be used when undertaking an ACHA. A predictive model is used to estimate the nature and distribution of evidence of Aboriginal land use in a subject area. The results produced by a predictive model can be used to identify PADs.

A predictive model should consider variables that may influence the location, distribution and density of sites, features or artefacts within a subject area. Variables typically relate to the environment and topography, such as soils, landscape features, slope, landform and cultural resources. The following predictions for the subject area have been formulated on the basis of previous assessments, regional models and the AHIMS data provided above.

There are several site types which are known to occur within New South Wales. These site types and their likelihood to occur within the subject area are evaluated in Table 4 below.

The general process archaeologists employ to determine the likelihood of any particular site type (artefact scatter, shelter, midden etc) to occur within a given subject area requires the synthesis of information for general distribution of archaeological sites within the wider area including:

- Detailed analysis of previous archaeological investigations within the same Region,
- Presence or absence of landscape features that present potential for archaeological resources (human occupation, use) such as raised terraces adjacent to permanent water,
- Analysis of the geology and soil landscape within the subject area which allows for a determination to be made of the type of raw material that would have been available for artefact production (silcrete, tuff, quartz etc) and the potential for the accumulation of archaeological resource within the subject area,
- Investigation of and determination of the level of disturbance/historical land use within the subject area which may impact on or remove entirely any potential archaeological material.

The combination of these would give us an indication of various levels of possibility of finding archaeological resource within a given area. Please refer to Table 3 below for an example of the indicative process of determining the likelihood of a given site occurring within a subject area.

Table 3 – Indicative process of determining the likelihood of a given site occurring within a subject area

Likelihood	Indicative subject area context	Indicative action
High	Low level of disturbance, presence of one or more archaeologically sensitive landforms (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc), presence of previously recorded archaeological site(s) and/or identification of previously unrecorded archaeological site(s) within the subject area	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.

<b>Likelihood</b>	<b>Indicative subject area context</b>	<b>Indicative action</b>
Moderate	Moderate level of disturbance, presence of one or more archaeologically sensitive landforms (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc), presence of previously recorded archaeological site(s) and/or identification of previously unrecorded archaeological site(s) within the subject area	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.
Low	High level of disturbance, presence of one archaeologically sensitive landform (raised terrace adjacent to permanent water, sand dunes, rock shelter etc), presence of archaeologically sensitive soil landscape (Tuggerah, Blacktown, South Creek etc).	Employ chance finds procedure and works can continue without further archaeological investigation.
Nil	Complete disturbance, complete removal of natural soil landscape, zero archaeologically sensitive landform, geological or soil features. Zero previously recorded archaeological sites.	Employ chance finds procedure and works can continue without further archaeological investigation.

Table 4 – Predictive Model

Site type	Description	Potential	Justification
Artefact Scatters	Artefact scatters represent past Aboriginal subsistence and stone knapping activities and include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface scatters of stone artefacts in areas where vegetation is limited, and ground surface visibility increases. Such scatters of artefacts are also often exposed by erosion, agricultural events such as ploughing, and the creation of informal, unsealed vehicle access tracks and walking paths. These types of sites are often located on dry, relatively flat land along or adjacent to rivers and creeks. Camp sites containing surface or subsurface deposit from repeated or continued occupation are more likely to occur on elevated ground near the most permanent, reliable water sources. Flat, open areas associated with creeks and their resource-rich surrounds would have offered ideal camping areas to the Aboriginal inhabitants of the local area.	Moderate	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the confluence of two former natural waterways.</li> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
Isolated Finds	<p>Isolated finds represent artefactual material in singular, one off occurrences. Isolated finds are generally indicative of stone tool production, although can also include contact sites.</p> <p>Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility. Isolated artefacts are likely to be located on landforms associated with past Aboriginal activities, such as ridgelines that would have provided ease of movement through the area, and level areas with access to water, particularly creeks and rivers.</p>	Moderate	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the confluence of two former natural waterways.</li> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
PAD	Potential Archaeological Deposits (or PADs) are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits of stone artefacts. Landscape	Moderate	<ul style="list-style-type: none"> <li>The subject area is located on the higher ground at the</li> </ul>

Site type	Description	Potential	Justification
	features which may feature in PADs include proximity to waterways, particularly terraces and flats near 3rd order streams and above; ridge lines, ridge tops and sand dune systems.		<p>confluence of two former natural waterways.</p> <ul style="list-style-type: none"> <li>The impact of historical ground disturbance is likely to be mitigated by the depth of the natural soil profile.</li> </ul>
Scarred Trees	Tree bark was utilised by Aboriginal people for various purposes, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments (sources cited in Attenbrow 2002: 113). The removal of bark exposes the heart wood of the tree, resulting in a scar. Trees may also have been scarred in order to gain access to food resources (e.g. cutting toeholds so as to climb the tree and catch possums or birds), or to mark locations such as tribal territories. Such scars, when they occur, are typically described as scarred trees. These sites most often occur in areas with mature, remnant native vegetation. The locations of scarred trees often reflect an absence of historical clearance of vegetation rather than the actual pattern of scarred trees. Carved trees are different from scarred trees, and the carved designs may indicate totemic affiliation (Attenbrow 2002: 204); they may also have been carved for ceremonial purposes or as grave markers.	Nil	<ul style="list-style-type: none"> <li>The subject area does not include vegetation of a suitable age to bear cultural modification.</li> </ul>
Axe Grinding Grooves	Grinding grooves are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone. They may be associated with creek beds, or water sources such as rock pools in creek beds and on platforms, as water enables wet-grinding to occur.	Low	<ul style="list-style-type: none"> <li>The subject area does not include any surface outcrops of sandstone, although subsurface sandstone may be present.</li> </ul>



Site type	Description	Potential	Justification
Bora/Ceremonial	Aboriginal ceremonial sites are locations that have spiritual or ceremonial values to Aboriginal people. Aboriginal ceremonial sites may comprise natural landforms and, in some cases, will also have archaeological material. Bora grounds are a ceremonial site type, usually consisting of a cleared area around one or more raised earth circles, and often comprised of two circles of different sizes, connected by a pathway, and accompanied by ground drawings or mouldings of people, animals or deities, and geometrically carved designs on the surrounding trees.	Low	<ul style="list-style-type: none"> <li>Historical land use in the subject area is likely to have destroyed any bora grounds or ceremonial sites.</li> </ul>
Burial	<p>Aboriginal burial of the dead often took place relatively close to camp site locations. This is due to the fact that most people tended to die in or close to camp (unless killed in warfare or hunting accidents), and it is difficult to move a body long distance.</p> <p>Soft, sandy soils on, or close to, rivers and creeks allowed for easier movement of earth for burial; and burials may also occur within rock shelters or middens. Aboriginal burial sites may be marked by stone cairns, carved trees or a natural landmark. Burial sites may also be identified through historic records or oral histories.</p>	Low	<ul style="list-style-type: none"> <li>The subject area is not situated on soft, sandy soils.</li> </ul>
Contact site	These types of sites are most likely to occur in locations of Aboriginal and settler interaction, such as on the edge of pastoral properties or towns. Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics by Aboriginal people or be sites of Aboriginal occupation in the historical period.	Moderate	<ul style="list-style-type: none"> <li>The subject area would have been at the margins of European settlement during the 19<sup>th</sup> century.</li> </ul>
Midden	Midden sites are indicative of Aboriginal habitation, subsistence and resource extraction. Midden sites are expressed through the occurrence of shell deposits of edible shell species often associated with dark, ashy soil and charcoal. Middens often occur in shelters, or in eroded or collapsed sand dunes. Middens occur along	Low	<ul style="list-style-type: none"> <li>Although located adjacent to waterways, it is likely that the subject area is too far upstream for a midden to be present.</li> </ul>

Site type	Description	Potential	Justification
	the coast or in proximity to waterways, where edible resources were extracted. Midden may represent a single meal or an accumulation over a long period of time involving many different activities. They are also often associated with other artefact types.		
Art	Art sites can occur in the form of rock engravings or pigment on sandstone outcrops or within shelters (discussed below). An engraving is some form of image which has been pecked or carved into a rock surface. Engravings typically vary in size and nature, with small abstract geometric forms as well as anthropomorphic Figures and animals also depicted (DECCW, 2010c). In the Sydney region engravings tend to be located on the tops of Hawkesbury Sandstone ridges where vistas occur. Pigment art is the result of the application of material to a stone to leave a distinct impression. Pigment types include ochre, charcoal and pipeclay. Pigment art within the Sydney region is usually located in areas associated with habitation and sustenance.	Low	<ul style="list-style-type: none"> <li>The subject area does not include any surface outcrops of sandstone, although subsurface sandstone may be present.</li> </ul>
Shelters	Shelter sites are places of Aboriginal habitation. They take the form of rock overhangs which provided shelter and safety to Aboriginal people. Suitable overhangs must be large and wide enough to have accommodated people with low flooding risk. Due to the nature of these sites, with generic rock overhangs common particularly in areas with an abundance of sandstone, their use by Aboriginal people is generally confirmed through the correlation of other site types including middens, art, PAD and/or artefactual deposits.	Nil	<ul style="list-style-type: none"> <li>The subject area does not include any rock overhangs.</li> </ul>

## 7.1 SUMMARY

The conclusions from the summary of the AHIMS results and predictive modelling are the following:

- There are no Aboriginal objects registered within the subject area.
- The subject area is located within 200m of a natural tributary of the Cooks River, suggesting a moderate potential for Aboriginal objects.
- The subject area has been the subject of moderate to high ground disturbance by historical land use.
- The subject area is located in the Birrong Soil Landscape, the depth of which may mitigate the impacts of historical ground disturbance.
- Due to the deep soil profile and proximity to water, it is considered that the subject area has moderate archaeological potential, despite moderate to high ground disturbance.

## 8 SCOPE AND METHODOLOGY FOR THE ACHA

### 8.1 SCOPE

The ACHA will be prepared in accordance with the legislative requirements of the NPW Act and the following guidelines:

- *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH, 2011).
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.*

The ACHA will:

- Synthesise the results of the technical investigation including the environment, existing Aboriginal cultural heritage and archaeological resources in the vicinity of the subject area;
- Include detailed research into the historical land use and impacts on the subject area;
- Include community consultation and any Aboriginal cultural heritage values identified, in compliance with the consultation requirements (DECCW, 2010);
- Include an assessment of significance of any Aboriginal objects or Aboriginal cultural heritage values that may exist within the subject area; and
- Include an impact assessment and provide management and mitigation measures to inform the SSD application.

## **8.2 PROPOSED METHODOLOGY**

The ACHA will follow the general methodology described below:

- Desktop assessment, including synthesising and evaluating background information of archaeological resources, existing and past environment and developing a predictive model.
- Consultation with the Registered Aboriginal Parties (RAPs) throughout the preparation of the ACHA.
- On-site meeting including site inspection of the subject area with the RAPs to allow for ample opportunity for cultural information to be provided and for the RAPs to familiarise themselves with the subject area and discuss the archaeological approach.

Note: This will be subject to Covid-19 social distancing measures, as applied by both the Federal and State governments, as well as those established by the client and Urbis.

- Undertake proposed test excavation program in accordance with methodology provided below.
- Preparation of draft ACHA synthesising all information collected during the process and providing the draft to the proponent and the RAPs for comments.
- Incorporate all comments and finalise the ACHA.

## **9 ABORIGINAL COMMUNITY INPUT POINTS FOR THE ACHA PROCESS**

Urbis welcomes input and information from the RAPs at any stage throughout the entire process of the ACHA. In line with the Consultation Requirements, the main input points for the consultation are the following:

- During Stage 2 - Presentation of information about the proposed project (this project information and methodology).
- During Stage 3 - Gathering information about cultural significance (this methodology and throughout the assessment process).
- During site inspection in consultation with and approval from the proponent.
- During Stage 4 - Review of the draft ACHA.

## **10 GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE**

In accordance with Section 4.3 of the Consultation Requirements, Urbis welcomes any information on cultural heritage and cultural significance of the subject area. Urbis is seeking information on cultural values and archaeological significance of the subject area, including:

- Whether there are any Aboriginal objects of cultural value to Aboriginal people in and near the subject area.
- Whether there are any places of cultural value to Aboriginal people in the area of the proposed project (whether they are Aboriginal places declared under s.84 of the NPW Act or not). This will include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

Please also consider the following when providing information:

- Do you have information on any Aboriginal objects within or near the subject area?
- Do you or somebody you know have information of cultural values, stories in relation to the subject area and if that information can be shared?

In order to comply with the Consultation Requirements, streamline information provided during Stage 2 and 3, and to inform the proponent for the field inspection component, Urbis would like to collect information from you in relation to the following:

1. Cultural connection: Please describe the nature of your cultural connection to the country on which the subject area is situated. Please include any relevant cultural knowledge or knowledge of Aboriginal objects or places within the subject area. Have you ever lived in or near the subject area? If you are a Traditional Owner, please state this clearly.
2. Representing your community members: Please state who you or your organisation represents. Do you or your organisation represent other members of the Aboriginal community? If so, please describe how information is provided to the other members, and how their information and knowledge may be provided back to the proponent and Urbis.
3. Previous experience: Please list your relevant (for example, in the area of the proposed project) previous experience in providing cultural heritage advice and survey participation.
4. Schedule of Rates: Please provide your Certificate of Currency including Product and Public Liability Insurance and Worker's Compensation. Please also include a schedule of rates (hourly/half day/day) for fieldwork participation, and include any expenses you may expect to incur, and these will be sought to be reimbursed. Please note that it is for the discretion for the proponent to decide if they invite RAPs for site works and the consultation process does not guarantee paid employment.

**Please find the above list at the end of this document in Appendix 2 for your convenience to fill-out and send back to Urbis.**

Please note that in accordance with Section 3.4 of the Consultation Requirements consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to the proponent 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.

## **11 SENSITIVE CULTURAL INFORMATION – MANAGEMENT PROTOCOL**

If you or your organisation has sensitive or restricted public access information for determining or managing the heritage values of the subject area, it is proposed that the proponent will manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- Any restrictions on access of the material.
- Any restrictions on communication of the material (confidentiality).

- Any restrictions on the location/storage of the material.
- Any cultural recommendations on handling the material.
- Any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and degree of authorisation.
- Any details of any consent given in accordance with customary law.
- Any access and use by the RAPs of the cultural information in the material.

Please consider the above list when providing your recommendations regarding any culturally sensitive information.

## 12 CRITICAL TIMELINES

Critical timelines for the ACHA are outlined in Table 5 below. Please note that some of these timeframes are estimates at this stage in the process and are provided to allow forward planning of personnel and resources.

Table 5 – Critical timelines.

Project Stage/Task	Date
Stage 2 and 3: Provision of comments on the provided project information and proposed methodology (this document).	Within 28 days from delivery of this document, by Close of Business 9 November 2020.
Stage 3: Site survey (if agreed to by proponent).	To be determined
Stage 4: Provision of the draft ACHA report (including the proposed management and mitigation measures) to the RAPs.	After 9 November 2020.
Stage 4: Provision of comments on draft ACHA report.	Within 28 days from delivery of the draft ACHA report to the RAPs.
Stage 4: Finalisation of the ACHA report including the consideration of all comments and feedback.	Within one week of the closing of the comment period for the draft ACHA report.





**Please provide the requested information by Close of Business 9 November 2020. Comments received after this date might be excluded from the draft ACHA. Please provide your comments in writing to:**

Andrew Crisp  
Urbis Pty Ltd  
Level 8  
Angel Place  
123 Pitt Street  
Sydney, 2000 NSW  
P: +61 2 8233 7642  
Email: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

Yours sincerely,

A handwritten signature in black ink, appearing to read "Andrew Crisp", written over a horizontal line.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)



## **APPENDIX 1 – BASIC AND EXTENSIVE AHIMS SEARCH RESULTS**

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 11 August 2020

Level 8 123 Angel Street  
Sydney New South Wales 2000

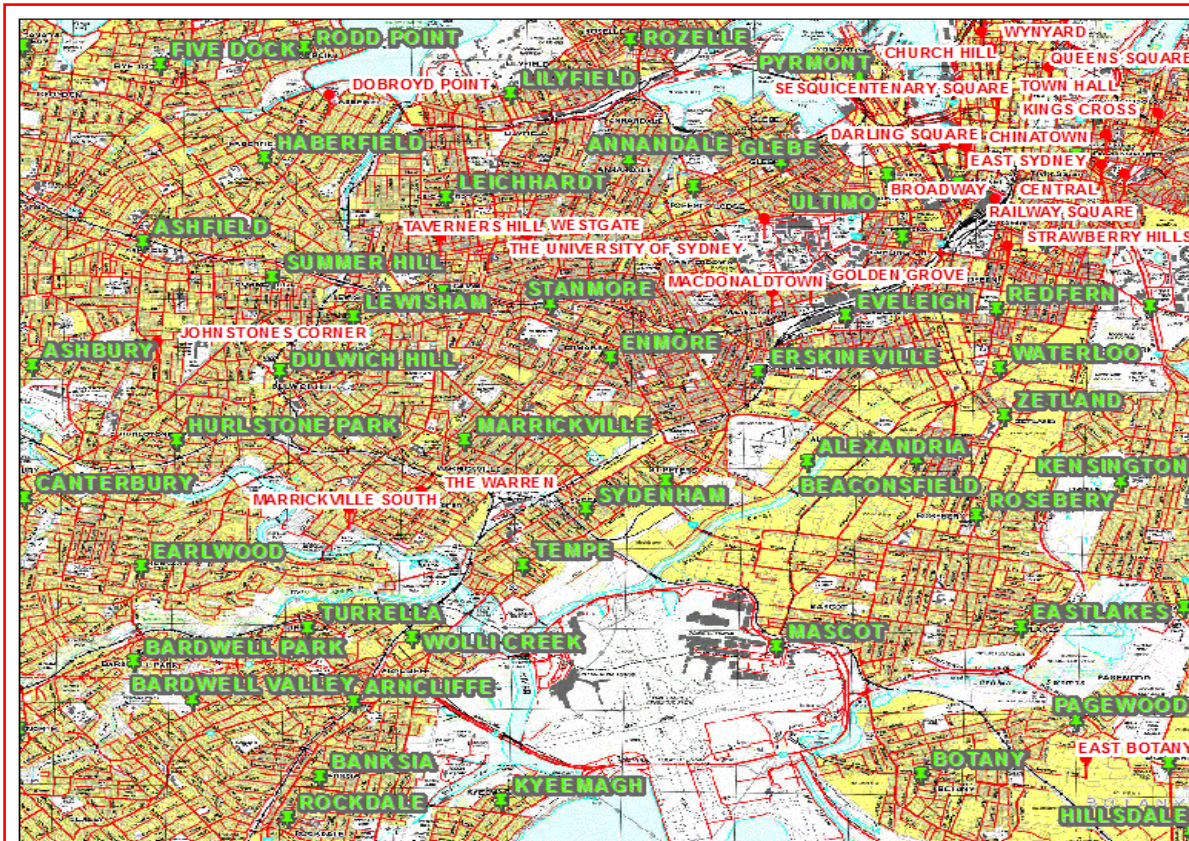
Attention: Aaron Olsen

Email: aolsen@urbis.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters, conducted by Aaron Olsen on 11 August 2020.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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

70	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.





# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2838	420 George Street PAD	AGD	56	334080	6250670	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Doctor.Tim Owen					<b>Permits</b>	2654	
45-6-2960	Jackson Landing Shelter	GDA	56	332442	6250870	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Mary Dallas Consulting Archaeologists (MDCA),Mr.Paul Irish					<b>Permits</b>		
45-6-2979	UTS PAD 1 14-28 Ultimo Rd Syd	GDA	56	333650	6249590	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting,Mr.Dominic Steele					<b>Permits</b>	3458	
45-6-3704	Tay Reserve Artefact	GDA	56	335723	6247268	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Mr.Michael Lever					<b>Permits</b>		
45-6-3705	Kent and Erskine St PAD	GDA	56	333876	6251145	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Ms.Jodi Cameron					<b>Permits</b>		
45-6-3693	Callan Park Scared Tree	GDA	56	330004	6251406	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3694	Callan Park Waterhole	GDA	56	330060	6251377	Open site	Valid	Water Hole : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3695	Callan Park Grinding Groove (possible)	GDA	56	330080	6251407	Open site	Valid	Grinding Groove : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3696	Callan Park Cultural Tree	GDA	56	330061	6251398	Open site	Valid	Aboriginal Resource and Gathering : -		
	<b>Contact</b>	<b>Recorders</b>	GML Heritage Pty Ltd + Context - Surry Hills,Doctor.Tim Owen					<b>Permits</b>		
45-6-3697	SR-OVRH-1	GDA	56	326178	6243095	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					<b>Permits</b>		
45-6-3698	WC-OVRH-1	GDA	56	325918	6243345	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					<b>Permits</b>		

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3699	WC-OVRH-2	GDA	56	326969	6244040	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-3700	WC-OVRH-4	GDA	56	327571	6244109	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-3701	WC-OVRH-3	GDA	56	327472	6244023	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney							
45-6-0262	Rodd Point;Rodd Park;	AGD	56	328700	6251000	Open site	Valid	Shell : -, Artefact : -	Midden	2047
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							
45-6-2547	Nanny Goat Hill 1;NGH 1;	AGD	56	328700	6244300	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0615	Undercliffe Road	AGD	56	328500	6244500	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Midden,Shelter with Art	99514
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers,D Burns							
45-6-1481	Rozelle Hospital 3	AGD	56	329902	6251129	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							
45-6-0629	Buoy;Botany Shell Midden;	AGD	56	334300	6241400	Closed site	Valid	Artefact : -, Shell : -, Burial : -	Burial/s,Midden,Sh elter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS							
45-6-2142	Hen & Chicken Bay, Five Dock,;	AGD	56	326200	6251250	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin							
45-6-2414	Wolli_Creek 1.6;	AGD	56	326280	6243580	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2415	Wolli_Creek 1.4;	AGD	56	325740	6243270	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2564	Wolli Creek 2.5	AGD	56	327250	6243760	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Tranby College							
45-6-2565	Wolli Creek 2.4	AGD	56	327010	6243900	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College							

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2566	Wolli Creek 2.1	AGD	56	326960	6243880	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2567	Wolli Creek	AGD	56	327250	6243760	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2568	Wolli Creek	AGD	56	327010	6244000	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2580	Junction Lane	AGD	56	335070	6250410	Open site	Valid	Artefact : -	Open Camp Site	102494,102763,102765
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw					<u>Permits</u>	894,902,903	
45-6-2581	Angel Place	GDA	56	334223	6251138	Open site	Valid	Artefact : -	Open Camp Site	97963,102494,102763,102765
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	918	
45-6-2416	Wolli_Creek 1.3;	AGD	56	325840	6243370	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2417	Wolli_Creek 1.2;	AGD	56	325880	6243400	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2418	Wolli_Creek 1.1;	AGD	56	325880	6243400	Closed site	Valid	Artefact : -	Shelter with Deposit	1452
	<u>Contact</u>	<u>Recorders</u>	Tranby College					<u>Permits</u>		
45-6-2198	View Street	AGD	56	329500	6244350	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Michael Guider					<u>Permits</u>	1330,1331	
45-6-1936	Rodd Point Cave;	AGD	56	328730	6251010	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-0751	Shea's Creek Dugong	GDA	56	331839	6245378	Open site	Destroyed	Artefact : -, Aboriginal Resource and Gathering : -, Non-Human Bone and Organic Material : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS,AECOM Australia Pty Ltd - Sydney,Mr.Luke Kirkwood					<u>Permits</u>		
45-6-1496	Shea's Creek	AGD	56	331697	6245597	Open site	Not a Site	Shell : -, Artefact : -	Midden	30,591,940
	<u>Contact</u>	<u>Recorders</u>	ASRSYS					<u>Permits</u>		

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2652	Ultimo PAD 1	GDA	56	333419	6249969	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Jim Wheeler,Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic							<b>Permits</b> 1598
45-6-2654	Fraser Park PAD	AGD	56	330100	6245800	Open site	Valid	Potential Archaeological Deposit (PAD) : -		98669,104256, 104257
	<b>Contact</b>	<b>Recorders</b>	Navin Officer Heritage Consultants Pty Ltd							<b>Permits</b> 1639
45-6-2687	Crown Street PAD 1	AGD	56	334950	6250300	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting							<b>Permits</b> 2017
45-6-2745	University of Sydney Law Building PAD	AGD	56	332350	6248740	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102201,10249 4,102763,1027 65
	<b>Contact</b>	<b>Recorders</b>	Doctor.Jo McDonald							<b>Permits</b> 2153,2320,2443
45-6-3071	445-473 Wattle Street PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<b>Contact</b>	<b>Recorders</b>	Biosis Pty Ltd - Sydney							<b>Permits</b>
45-6-2987	Poultry Market 1	GDA	56	333746	6249575	Open site	Valid	Artefact : 1		102494,10276 3
	<b>Contact</b>	<b>Recorders</b>	Ms.Samantha Higgs,Biosis Pty Ltd - Canberra							<b>Permits</b> 3506
45-6-3064	445-473 WATTLE ST PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102763
	<b>Contact</b>	<b>Recorders</b>	Biosis Pty Ltd - Sydney							<b>Permits</b>
45-6-3155	Moore Park AS1	GDA	56	335613	6247909	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<b>Permits</b> 4019
45-6-3552	Smith Hogan and Spindlers Park Midden	GDA	56	331309	6249791	Open site	Not a Site	Shell : -, Burial : -		104371
	<b>Contact</b>	<b>Recorders</b>	Mr.Mark Simon							<b>Permits</b>
45-6-3654	CRS AS 01 (Central Railway Station Artefact scatter 01)	GDA	56	334055	6249146	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							<b>Permits</b>
45-6-2629	Broadway 1	AGD	56	333060	6249100	Open site	Valid	Artefact : -		102494,10276 3,102765
	<b>Contact</b>	<b>Recorders</b>	Dominic Steele Archaeological Consulting							<b>Permits</b> 1299
45-6-2637	George street 1	AGD	56	333860	6249880	Open site	Valid	Artefact : -		98238,102494, 102763,10276 5

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	1369	
45-6-2783	PAD Central Royal Botanic Gardens	AGD	56	334900	6251030	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Haglund and Associates					<u>Permits</u>	2364	
45-6-2767	Tent Embassy	AGD	56	332680	6248680	Open site	Valid	Aboriginal Resource and Gathering : 1		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Bill Lord					<u>Permits</u>		
45-6-2796	320-328 George St PAD	AGD	56	334100	6251050	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Mr.Dominic Steele					<u>Permits</u>	2415	
45-6-2822	USYD: Central	AGD	56	332750	6248550	Open site	Valid	Artefact : -		100302,10249 4,102763,1027 65
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML					<u>Permits</u>	2554	
45-6-3152	168-190 Day Street, Sydney PAD	GDA	56	333877	6250257	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Josh Symons,Mr.Alex Timms					<u>Permits</u>	3789	
45-6-3116	Wynyard Walk PAD	GDA	56	333931	6251252	Open site	Destroyed	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	GML Heritage Pty Ltd + Context - Surry Hills,GML Heritage Pty Ltd + Context - Surry					<u>Permits</u>	3670	
45-6-3217	Darling Central Midden	GDA	56	333530	6250101	Open site	Valid	Aboriginal Ceremony and Dreaming : 1, Artefact : 1, Shell : 1		
	<u>Contact</u>	<u>Recorders</u>	Comber Consultants Pty Limited,Ms.Tory Stening					<u>Permits</u>		
45-6-3322	Timbrell Park Midden	GDA	56	327989	6250589	Open site	Valid	Shell : -		
	<u>Contact</u>	<u>Recorders</u>	DPIE,Ms.Sam Higgs					<u>Permits</u>		
45-6-3324	RBG PAD 1	GDA	56	334802	6251224	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	AMAC Group P/L,Mr.Benjamin Streat					<u>Permits</u>		
45-6-3338	The Bays Precinct PAD02	GDA	56	332354	6250885	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Mr.Michael Lever					<u>Permits</u>		

Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Woolies\_bas10km

Client Service ID : 526644

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-6-3339	The Bays Precinct PAD01	GDA	56	332779	6250555	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma <u>Permits</u>							

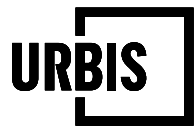
Report generated by AHIMS Web Service on 11/08/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 325811 - 335811, Northings : 6241445 - 6251445 with a Buffer of 0 meters. Additional Info : Aboriginal Due Diligence. Number of Aboriginal sites and Aboriginal objects found is 70

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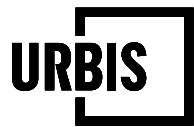


## **APPENDIX 2 – QUESTIONNAIRE**





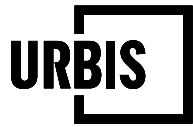
1. **Cultural connection:** Please describe the nature of your cultural connection to the country on which the subject area is situated. Please include any relevant cultural knowledge or knowledge of Aboriginal objects or places within the subject area. Have you ever lived in or near the subject area? If you are a Traditional Owner, please state this clearly.



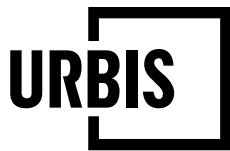
2. **Representing your community members: Please state who you or your organisation represents. Do you or your organisation represent other members of the Aboriginal community? If so, please describe how information is provided to the other members, and how their information and knowledge may be provided back to the Proponent and Urbis.**



3. **Previous experience:** Please list your relevant (for example, in the area of the proposed project) previous experience in providing cultural heritage advice and survey participation.



4. **Schedule of Rates:** Please provide your Certificate of Currency including Product and Public Liability Insurance and Worker's Compensation. Please also schedule of rates (hourly/half day/day) for fieldwork participation, and include any expenses you may expect to incur, and these will be sought to be reimbursed. Please note that it is for the discretion for the Proponent to decide if they invite RAPs for site works and the consultation process does not guarantee paid employment.



**ANGEL PLACE  
LEVEL 8, 123 PITT STREET  
SYDNEY NSW 2000**

URBIS.COM.AU  
Urbis Pty Ltd  
ABN 50 105 256 228

3 November 2020

To whom it may concern,

## **P0026069 - ABORIGINAL CULTURAL HERITAGE ASSESSMENT - 74 EDINBURGH ROAD, MARRICKVILLE - SITE VISIT - REGISTRATION OF INTEREST**

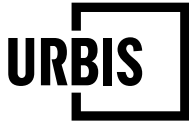
Thank you for registering your interest and taking an active role in the consultation process for the Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville (hereafter referred to as 'the subject area').

In accordance with Section 4.2 and 4.3 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010) (hereafter referred as the Consultation Requirements) Urbis invites you on behalf of Woolworths Group Limited (the proponent) to register your interest in an on-site meeting. This meeting will provide the opportunity to familiarise yourself with the subject area, to discuss the cultural heritage approach and raise any cultural heritage information or concerns in accordance with Section 4.3 of the Consultation Requirements.

The proposed works include demolition of the existing buildings, associated structures and landscaping; construction of a two storey warehouse comprising a speculative warehouse at level 1 (ground level) and Customer Fulfillment Centre (CFC) at level 2; construction of associated offices across five levels to be used by Woolworths in conjunction with the warehouse and CFC; a two storey car park adjacent to Edinburgh Road; a two storey hardstand loading and delivery area adjacent Sydney Steel Road; private vehicle access from two points on Edinburgh Road; heavy vehicle / loading vehicle access from four points on Sydney Steel Road; and tree removal and landscaping works.

The subject area has a high level of disturbance caused by various historical land use activities that significantly changed the original environment. Please also note that there is little to no ground surface visibility within the subject area.

The site visit is currently proposed to take place from **9am-11am, Thursday 12<sup>th</sup> November 2020** and will include a brief walk over of the project area followed by a discussion within the grounds.



Please also be advised that due to the current environment around social distancing rules for COVID19, one representative from each group is invited to attend. There will be additional measures implemented that everyone will need to be adhered to, including not attending site visit if you feel unwell or have been sick with the relevant symptoms. These will be detailed in the formal invitation after the required information is provided. Please provide:

- Digital copy of your Certificate of currency, including public liability insurance and workers' compensation insurance.
- Name and contact details of the nominated site officer.

The proponent has agreed to remuneration for:

- One representative from each registered organisation for the two-hour site visit. The hourly rate agreed to be the Proponent is [REDACTED].
- **Note:** Travel costs will not be remunerated. These conditions are non-negotiable.

If you agree to the above provisions, please provide the requested information no later than **Tuesday 10<sup>th</sup> November 2020**. Please note that due to site access logistical arrangements and compliance with COVID protocols if the requested details are not supplied by that date your organisation will unfortunately not be permitted access to site.

Please provide your registration of interest and associate documentation to:

Andrew Crisp  
Urbis Pty Ltd  
Angel Place  
level 8, 123 Pitt Street  
Sydney, 2000 NSW  
D: 02 8233 7642  
Email: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

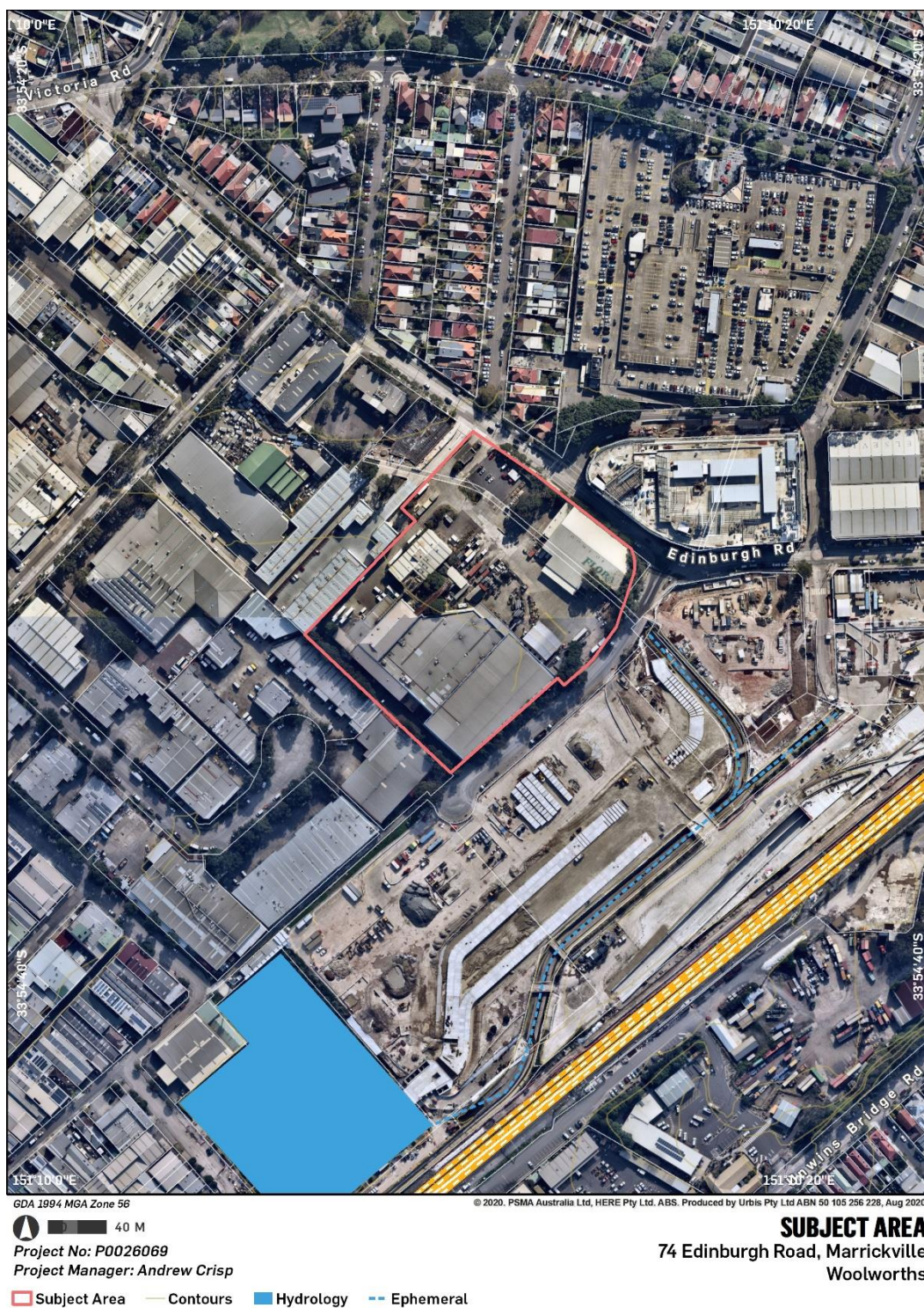
Please do not hesitate to contact us should you have any queries in relation to the provided information.

Kind regards,

A handwritten signature in black ink, appearing to read "Andrew Crisp", written over a horizontal line.

Andrew Crisp  
Senior Consultant  
+61 2 8233 7642  
[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)





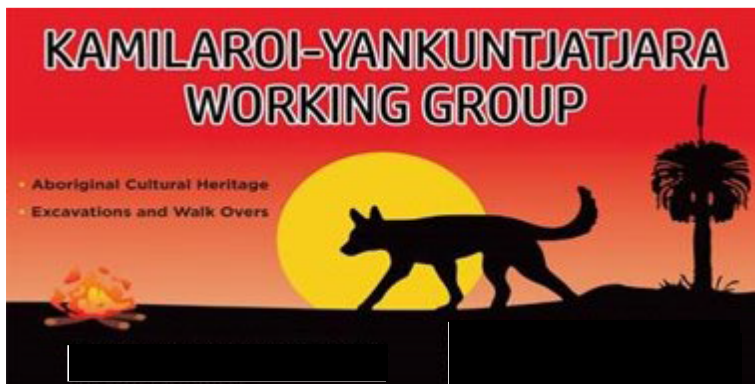
**From:** [philip.khan](#)  
**To:** [Aaron Olsen](#)  
**Subject:** RE: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)  
**Date:** Monday, 19 October 2020 5:38:42 PM  
**Attachments:** [C6F28BF29FE44AC6A296819C620C76C1.png](#)  
[CBA4E8E30E8F447C9F6E26708BEE7E9B.png](#)  
[F8909F6ABB0F42FD87239F53ABE0151D.png](#)  
[BBFFACD8B9704243A22A1808BA5499DA.png](#)  
[779379DADF9148EE89AEF0C3CD2047CD.png](#)

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Hi Aaron,

I have read your ACHA report, we agree and support your report regarding 74 Edinburgh Rd, Marrickville.

Kind Regards  
Phil Khan



Sent from [Mail](#) for Windows 10

---

**From:** [Aaron Olsen](#)  
**Sent:** Monday, 12 October 2020 3:12 PM  
**Cc:** [Andrew Crisp](#)  
**Subject:** ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)

Good afternoon

In accordance with Stage 2 and Stage 3 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010), please find attached the combined Stage 2 (presentation of information about the proposed project) and Stage 3 (gathering information about cultural significance) document for the proposed development of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville, NSW.

Please provide all comments by **5pm, 9<sup>th</sup> November 2020** to:

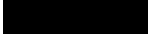
Andrew Crisp  
Senior Consultant  
Angel Place, Level 8, 123 Pitt Street, Sydney 2000  
P: 02 8233 7642  
E: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

If you have any questions, please do not hesitate to contact us.

**From:** [jesse johnson](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)  
**Date:** Tuesday, 13 October 2020 9:28:41 AM  
**Attachments:** [image002.png](#)  
[image008.png](#)  
[image010.png](#)  
[image004.png](#)  
[image006.png](#)

---

Hi Aaron,  
I have read the project information and proposed methodology for the above project, I agree with the recommendations made.

Kind regards  
Jesse Johnson  


On Monday, 12 October 2020, 03:12:01 pm AEDT, Aaron Olsen <aolsen@urbis.com.au> wrote:

Good afternoon

In accordance with Stage 2 and Stage 3 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010), please find attached the combined Stage 2 (presentation of information about the proposed project) and Stage 3 (gathering information about cultural significance) document for the proposed development of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville, NSW.

Please provide all comments by **5pm, 9<sup>th</sup> November 2020** to:

Andrew Crisp  
Senior Consultant  
Angel Place, Level 8, 123 Pitt Street, Sydney 2000  
P: 02 8233 7642  
E: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

If you have any questions, please do not hesitate to contact us.

Kind regards

**AARON OLSEN**  
HERITAGE ASSISTANT  
D +61 2 8233 9957  
T +61 2 8233 9900  
E [aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)



**From:** [Darleen Johnson](#)  
**To:** [Aaron Olsen](#)  
**Subject:** Re: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)  
**Date:** Thursday, 5 November 2020 2:28:34 PM  
**Attachments:** [image002.png](#)  
[image004.png](#)  
[image006.png](#)  
[image008.png](#)  
[image010.png](#)

---

Hi Aaron

I have read the project information and methodology method for the above project, I endorse the recommendations made.

Kind regards

Darleen Johnson



On Monday, 12 October 2020, 03:12:02 pm AEDT, Aaron Olsen <aolsen@urbis.com.au> wrote:

Good afternoon

In accordance with Stage 2 and Stage 3 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010), please find attached the combined Stage 2 (presentation of information about the proposed project) and Stage 3 (gathering information about cultural significance) document for the proposed development of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville, NSW.

Please provide all comments by **5pm, 9<sup>th</sup> November 2020** to:

Andrew Crisp

Senior Consultant

Angel Place, Level 8, 123 Pitt Street, Sydney 2000

P: 02 8233 7642

E: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

If you have any questions, please do not hesitate to contact us.

Kind regards

**AARON OLSEN**

HERITAGE ASSISTANT

D +61 2 8233 9957

T +61 2 8233 9900

E [aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)

## Aaron Olsen

---

**From:** Kaarina Slater [REDACTED] >  
**Sent:** Monday, 2 November 2020 1:51 PM  
**To:** Aaron Olsen  
**Subject:** Re: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)  
**Attachments:** image001.gif; image002.png; image004.png; image006.png; image008.png; image010.png

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Ngambaa Cultural connections has no further comments.

Regards  
Kaarina Slater  
Director  
[REDACTED]

Sent from my iPhone

> On 12 Oct 2020, at 3:12 pm, Aaron Olsen <aolsen@urbis.com.au> wrote:  
>  
> Good afternoon  
>  
> In accordance with Stage 2 and Stage 3 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010), please find attached the combined Stage 2 (presentation of information about the proposed project) and Stage 3 (gathering information about cultural significance) document for the proposed development of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville, NSW.  
>  
> Please provide all comments by 5pm, 9th November 2020 to:  
>  
> Andrew Crisp  
> Senior Consultant  
> Angel Place, Level 8, 123 Pitt Street, Sydney 2000  
> P: 02 8233 7642  
> E: acrisp@urbis.com.au  
>  
> If you have any questions, please do not hesitate to contact us.  
>  
> Kind regards  
>  
> Aaron Olsen  
> Heritage Assistant  
>  
> D +61 2 8233 9957  
> T +61 2 8233 9900  
> E aolsen@urbis.com.au<mailto:aolsen@urbis.com.au>  
>  
> [Urbis  
> Website]<https://aus01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.urbis.com.au%2F%3Futm\_source%3DGeneric%2520email%2520footer%26utm\_medium%3Demail%26utm\_content%3DGeneric%2520email%2520MAIN%2520IMAG%26utm\_campaign%3DGeneric%2520Email%2520Footer%2520&data=04%7C01%7Caolsen%40urbis.com.au%7C232d234d655e495b33b808d87eda276b%7C7ef157a75d2e48b4860237a8eabf1461%7C0%7C0%7C637398822733823127%7CUnknown%7CTWFPbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6lk1haWwiLCJXVCi6Mn0%3D%7C1000&data=pDo1MaOBumLT3TAmrvL83bnKbAaVE6VKWM9eqQAdV2c%3D&reserved=0(Main%20Image)>  
>  
> [Urbis  
> website]<https://aus01.safelinks.protection.outlook.com/?url=http%3A%2

**From:** [Andrew Crisp](#)  
**To:** [Aaron Olsen](#)  
**Subject:** FW: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)  
**Date:** Tuesday, 3 November 2020 9:18:06 AM  
**Attachments:** [image012.png](#)  
[image013.png](#)  
[image014.png](#)  
[image015.png](#)  
[image016.png](#)  
[image017.png](#)  
[image018.png](#)  
[image019.png](#)  
[image020.png](#)  
[image021.png](#)

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For inclusion in consult log and ACHA

**ANDREW CRISP**  
SENIOR CONSULTANT

D +61 2 8233 7642  
T +61 2 8233 9900  
E [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

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SYDNEY, NSW 2000, AUSTRALIA

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---

**From:** WIDESCOPE . <[REDACTED]>  
**Sent:** Tuesday, 3 November 2020 8:19 AM  
**To:** Andrew Crisp <[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)>  
**Subject:** RE: ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)

Hi Andrew

Thank you for providing me with the Methodology Re: 74 Edinburgh Road, Marrickville

I have reviewed and support the recommendations outlined in the Aboriginal Cultural Heritage Assessment (ACHA)



Regards  
Steven Hickey

---

**From:** [Aaron Olsen](#)  
**Sent:** Monday, 12 October 2020 3:12 PM  
**Cc:** [Andrew Crisp](#)  
**Subject:** ACHA Stages 2&3 - 74 Edinburgh Road, Marrickville (Our Ref P0026069)

Good afternoon

In accordance with Stage 2 and Stage 3 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010), please find attached the combined Stage 2 (presentation of information about the proposed project) and Stage 3 (gathering information about cultural significance) document for the proposed development of Lot 202 in DP 1133999, Lot 3 in DP 318232 and Lot 3 in DP 180969 at 74 Edinburgh Road, Marrickville, NSW.

Please provide all comments by **5pm, 9<sup>th</sup> November 2020** to:

Andrew Crisp  
Senior Consultant  
Angel Place, Level 8, 123 Pitt Street, Sydney 2000  
P: 02 8233 7642  
E: [acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

If you have any questions, please do not hesitate to contact us.

Kind regards

**AARON OLSEN**  
HERITAGE ASSISTANT  
D +61 2 8233 9957  
T +61 2 8233 9900  
E [aolsen@urbis.com.au](mailto:aolsen@urbis.com.au)

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## Meggan Walker

---

**From:** Meggan Walker  
**Sent:** Wednesday, 13 January 2021 2:43 PM  
**To:** Andrew Crisp  
**Cc:** Balazs Hansel  
**Subject:** 74 Edinburgh Road, Marrickville - ACHA - Stage 4 Draft ACHAR (Our Ref P006069)  
**Attachments:** P0026069\_Woolworths\_ACHAR\_D02\_20210112\_1.pdf

Dear all,

Please see the draft ACHA for 74 Edinburgh Road, Marrickville, NSW, available for download here:

 [P0026069 Woolworths ACHAR D02 20210112 Reduced.pdf](#)

Unfortunately the file with appendices (Geotechnical reports) was too large to attach, and so the attached file provides the ACHAR without appendices.

Please review and provide any comments or queries relating to the ACHA by **COB 10<sup>th</sup> February 2021**. Comments can be provided to myself or Andrew Crisp, preferably by email. Andrew's details are included below:

*Andrew Crisp*

*Urbis, Senior Archaeologist*

[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

02 8233 7642

Level 8/123 Pitt Street, Sydney, 2000.

Please don't hesitate to get in contact if you have any questions.

Kind regards,

**MEGGAN WALKER**

CONSULTANT

D +61 2 8233 7626

T +61 2 8233 9900

E [mwalker@urbis.com.au](mailto:mwalker@urbis.com.au)

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**From:** [Meggan Walker](#)  
**To:** [Andrew Crisp](#); [Aaron Olsen](#)  
**Subject:** FW: 74 Edinburgh Road, Marrickville - ACHA - Stage 4 Draft ACHAR (Our Ref P006069)  
**Date:** Thursday, 11 February 2021 12:09:35 PM  
**Attachments:** [image003.png](#)  
[6B70BC8C2D124D5F8F0F3E303C6D39BD.png](#)  
[9B22979D76574898961638A75C4351F6.png](#)  
[3D6CA306CF264E9ABAF595AAFFA1E600.png](#)  
[58FE71F70509450F95D9B347877A886C.png](#)  
[98F194F492154E22ACA252BFFC2746AF.png](#)  
[image010.png](#)  
[image016.png](#)  
[image017.png](#)  
[image018.png](#)  
[image019.png](#)

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**MEGGAN WALKER**  
CONSULTANT

D +61 2 8233 7626

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E [mwalker@urbis.com.au](mailto:mwalker@urbis.com.au)

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---

**From:** philip khan [REDACTED] >  
**Sent:** Monday, 1 February 2021 1:06 PM  
**To:** Meggan Walker <[mwalker@urbis.com.au](mailto:mwalker@urbis.com.au)>  
**Subject:** RE: 74 Edinburgh Road, Marrickville - ACHA - Stage 4 Draft ACHAR (Our Ref P006069)

Hi Meggan,

Thankyou for your ACHA report regarding 74 Edinburgh Rd, Marrickville, we agree and support all your recommendations & look forward to working with you and the team on this project.

Have a great afternoon!

Kind Regards

Phil Khan



Sent from [Mail](#) for Windows 10

---

**From:** [Meggan Walker](#)

**Sent:** Wednesday, 13 January 2021 2:44 PM

**To:** [Andrew Crisp](#)

**Cc:** [Balazs Hansel](#)

**Subject:** 74 Edinburgh Road, Marrickville - ACHA - Stage 4 Draft ACHAR (Our Ref P006069)

Dear all,

Please see the draft ACHA for 74 Edinburgh Road, Marrickville, NSW, available for download here:

 [P0026069\\_Woolworths\\_ACHAR\\_D02\\_20210112\\_Reduced.pdf](#)

Unfortunately the file with appendices (Geotechnical reports) was too large to attach, and so the attached file provides the ACHAR without appendices.

Please review and provide any comments or queries relating to the ACHA by **COB 10<sup>th</sup> February 2021**. Comments can be provided to myself or Andrew Crisp, preferably by email. Andrew's details are included below:

*Andrew Crisp*

*Urbis, Senior Archaeologist*

[acrisp@urbis.com.au](mailto:acrisp@urbis.com.au)

02 8233 7642

Level 8/123 Pitt Street, Sydney, 2000.

Please don't hesitate to get in contact if you have any questions.

Kind regards,

**MEGGAN WALKER**

CONSULTANT

D +61 2 8233 7626

T +61 2 8233 9900

E [mwalker@urbis.com.au](mailto:mwalker@urbis.com.au)

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# APPENDIX D    **CONSULTATION LOG**

Date	Time	Type	Contacted	Contacted Individual	Contacted by	Contacted by Individual	Subject	Reply	Follow-up needed?	Person actioned	Comment
<b>Stage 1 Agency notice</b>											
25/08/2020	1:17pm	email	NNTT	n/a	Urbis	AO	Stage 1.1	n/a	No	n/a	n/a
26/08/2020	11:11am	email	DPC	n/a	Urbis	AC	Stage 1.2 Agency Notice	n/a	No	n/a	n/a
26/08/2020	11:11am	email	GSLLS	n/a	Urbis	AC	Stage 1.2 Agency Notice	n/a	No	n/a	n/a
26/08/2020	11:11am	email	ORALRA	n/a	Urbis	AC	Stage 1.2 Agency Notice	n/a	No	n/a	n/a
26/08/2020	11:11am	email	Inner West Council	n/a	Urbis	AC	Stage 1.2 Agency Notice	n/a	No	n/a	n/a
26/08/2020	11:11am	email	NTSCorp	n/a	Urbis	AC	Stage 1.2 Agency Notice	n/a	No	n/a	n/a
26/08/2020	8:28pm	email	Urbis	AO	NNTT	n/a	Stage 1.1	No Native Title Applications, Determinations or Indigenous Land Use Agreements	No	n/a	n/a
28/08/2020	11:07am	email	Urbis	AC	DPC	Barry Gunther	Stage 1.2 Agency Response	List of potential RAPs provided	No	n/a	n/a
1/09/2020	2:25pm	email	Urbis	AC	ORALRA	Rachel Rewiri	Stage 1.2 Agency Response	No Registered Aboriginal Owners in subject area	No	n/a	n/a
3/09/2020	1:05pm	Phone call	Urbis	AC	Inner West Council - Aboriginal Community Advisory Committee	Deborah Lennis	Stage 1.2 Agency Notice and registration in general	Deborah discussed the Inner West Council's Aboriginal Community Advisory Committee, her role on the committee, the committee's contact details and her supplying the formal invitation letters to her contacts within the community.	Y	AC	n/a
3/09/2020	1:20pm	email	Inner West Council - Aboriginal Community Advisory Committee	Deborah Lennis	Urbis	AC	Stage 1.2 Agency Notice and registration in general	Confirmed IWCACAC registration for the project and their agreement to forward consultation documentation to their members.	No	n/a	n/a
<b>Stage 1 RAP notice/advertisement</b>											
7/09/2020	2:23pm	email	45 Potential RAPs	n/a	Urbis	AO	Stage 1.3 Invitation to Register	n/a	N	n/a	n/a
7/09/2020	2:24pm	email	Urbis	AO	Thoorga Nura	John Carriage	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
7/09/2020	4:01pm	email	Urbis	AO	DNC	Lilly Carroll / Paul Boyd	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
7/09/2020	9:13pm	email	Urbis	AO	Barking Owl	Jody Kulakowski	Stage 1.3 Registration	Registration of interest	N	n/a	n/a



8/09/2020	7:38am	email	Urbis	AO	KYWG	Phil Khan	Stage 1.3 Registration	Registration of interest & insurances provided	N	n/a	n/a
9/09/2020	12:33pm	email	Urbis	AC	Murra Bidgee	Darleen Johnson	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
9/09/2020	12:33pm	email	Urbis	AC	Muragadi	Jesse Johnson	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
9/09/2020	12:36pm	email	Urbis	AC	Merrigarn	Shaun Carroll	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
14/09/2020	12:05pm	email	Urbis	AO	A1	Carolyn Hickey	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
15/09/2020	1:45pm	email	Urbis	AO	Ginninderra Aboriginal Corporation	Krystle Carroll-Elliott	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
16/09/2020	11:50am	email	Urbis	AC	Widescope	Steven Hickey	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
18/09/2020	7:13pm	email	Urbis	AO	Gulaga	Wendy Smith	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
18/09/2020	8:21pm	email	Urbis	AO	Wailwan Aboriginal Group	Phil Boney	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
22/09/2020	4:19pm	email	Urbis	AO	Ngambaa Cultural Connections	Kaarina Slater	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
30/09/2020	10:47am	email	Urbis	AC	MLALC	Selina Timothy	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
8/10/2020	12:04am	email	Urbis	AC	Butucarbin	Lowanna Gibson	Stage 1.3 Registration	Registration of interest	N	n/a	n/a
14/10/2020	10:30am	email	MLALC	n/a	Urbis	AC	Stage 1.6 Notice	n/a	N	n/a	n/a
14/10/2020		email	Heritage NSW	n/a	Urbis	AC	Stage 1.6 Notice	n/a	N	n/a	n/a
<b>Stage 2 and 3</b>											
12/10/2020	3:12pm	email	All RAPs	n/a	Urbis	AO	Stage 2-3 Document Provided	n/a	N	n/a	n/a
13/10/2020	9:28am	email	Urbis	AO	Muragadi	Jesse Johnson	Stage 2-3 RESPONSE	I have read the project information and proposed methodology for the above project, I agree with the recommendations made.	N	n/a	n/a
19/10/2020	5:39am	email	Urbis	AO	KYWG	Phil Khan	Stage 2-3 RESPONSE	I have read your ACHA report, we agree and support your report regarding 74 Edinburgh Rd, Marrickville.	N	n/a	n/a
2/11/2020	1:51pm	email	Urbis	AO	Ngambaa Cultural Connections	Kaarina Slater	Stage 2-3 RESPONSE	Ngambaa Cultural connections has no further comments.	N	n/a	n/a
3/11/2020	8:19am	email	Urbis	AC	Widescope	Steven Hickey	Stage 2-3 RESPONSE	I have reviewed and support the recommendations out lined in the Aboriginal Cultural Heritage Assessment (ACHA)	N	n/a	n/a
3/11/2020	5:09pm	email	All RAPs	n/a	Urbis	AO	Site Visit - Invitation	n/a	N	n/a	n/a

3/11/2020	5:58pm	email	Urbis	AO	Ginninderra	Krystle Carroll-Elliott	Site Visit	Confirming Attendance	N	n/a	n/a
3/11/2020	7:15pm	email	Urbis	AO	DNC	Paul Boyd / Lilly Carroll	Site Visit	Confirming Attendance	N	n/a	n/a
4/11/2020	12:06pm	email	Urbis	AO	Muragadi	Jesse Johnson	Site Visit	Confirming Attendance	N	n/a	n/a
5/11/2020	9:08am	email	Urbis	AO	KYWG	Phil Khan	Site Visit	Confirming Attendance	N	n/a	n/a
5/11/2020	9:55am	email	DNC	Paul Boyd / Lilly Carroll	Urbis	AO	Site Visit	Request for Information / Insurances	N	n/a	n/a
5/11/2020	10:08am	email	Urbis	AO	DNC	Paul Boyd / Lilly Carroll	Site Visit	Advising representative details	N	n/a	n/a
5/11/2020	10:09am	email	Urbis	AO	DNC	Paul Boyd / Lilly Carroll	Site Visit	Provided insurances	N	n/a	n/a
9/11/2020	9:22am	email	All RAPs (excl. site visit registrerees)	n/a	Urbis	AO	Site Visit - Invitation	Reminder	N	n/a	n/a
9/11/2020	9:38am	email	Urbis	AO	A1	Carolyn Hickey	Site Visit	Confirming Attendance	N	n/a	n/a
9/11/2020	9:55am	email	Urbis	AO	AHCS	Amanda DeZwart	Site Visit	Late Registration of Interest / Confirming Attendance	N	n/a	n/a
9/11/2020	6:51pm	email	Urbis	AO	Ngaamba	Kaarina Slater	Site Visit	Confirming Attendance	N	n/a	n/a
10/11/2012	8:45am	phone	Urbis	AO	Wailwan	Phil Boney	Site Visit	Unable to attend	N	n/a	n/a
10/11/2012	10:49am	email	Urbis	AO	Barking Owl	Jody Kulakowski	Site Visit	Confirming Attendance	N	n/a	n/a
10/11/2012	5:30pm	email	Urbis	AO	Ngaamba	Kaarina Slater	Site Visit	Provided insurances	N	n/a	n/a
10/11/2012	5:31pm	email	Urbis	AO	Merrigarn	Shaun Carroll	Site Visit	Confirming Attendance	N	n/a	n/a
10/11/2012	8:17pm	email	Urbis	AO	KYWG	Phil Khan	Site Visit	Advising representative details	N	n/a	n/a
11/11/2020	3:57pm	email	Site Visit Registrerees	n/a	Urbis	AC	Site Visit	Advising details of site visit	N	n/a	n/a
12/11/2020	3:57pm	email	Site Visit Registrerees	n/a	Urbis	AC	Site Visit	Advising invoicing details for site visit	N	n/a	n/a
<b>Stage 4</b>											
13/01/2021	2:43pm	email	ALL RAPs	N/A	Urbis	MW	Stage 4 Draft ACHAR	Comments to be received by 10/02/21	Y - 2 weeks	MW	N/A
1/02/2021	1:06pm	email	Urbis	Meggan Walker	KYWG	Phil Khan	Stage 4 Response	Thankyou for your ACHA report regarding 74 Edinburgh Rd, Marrickville, we agree and support all your recommendations & look forward to working with you and the team on this project.	N	AO	N/A

