

12 December 2018

Mr Matthew Hill
Blue Sky
Level 46, 111 Eagle Street
BRISBANE QLD 4000

Our Ref: 18-0532mhc1

Re: Aboriginal Heritage—Advice for 4–18 Doncaster Avenue, Randwick, NSW

Dear Mr Hill

This letter provides Blue Sky with advice with respect to the project State Significant Development (SSD 9649) Secretary's Environmental Assessment Requirements (SEARs), notably Key Issue 7(3), the previously issued Aboriginal Heritage Impact Permit (AHIP), under Section 90 of the *National Parks and Wildlife Act 1974* (NSW).

SEARs

SEARs Key Issue 7(3) requires that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared for the project.

In 2017, on behalf of Built Pty Ltd, GML Heritage Pty Ltd (GML) prepared an ACHAR for the site and consequently applied to the NSW Office of Environment and Heritage (OEH) for an AHIP, which allowed direct *harm* to Aboriginal site 45-6-3245 and indirect *harm* to Aboriginal site 45-6-3246, through a process of conservation.

AHIP Requirements

The OEH issued AHIP C0003723 on 22 June 2018. The AHIP has 33 conditions that must be followed during future works associated with the site. These works include a range of conservation requirements, archaeological management and mitigation measures. The land to which the AHIP applies is defined in AHIP Attachment 1; the 'no harm' (conservation area) and requirements for conservation are defined in Attachment 2; Attachment 3 presents the full requirements for Aboriginal archaeological work.

Prior to any development commencing, the zone for conservation will need to be clearly established. This area should not be subject to any impact, other than conservation, during all works.

The archaeological work specified under the AHIP (PDF pages 23–26) will need to be completed prior to any construction work commencing.

Once issued, the new DA will need to be submitted to the OEH and the AHIP can be transferred to Blue Sky. The OEH's AHIP transfer form should be used for this transfer.

Sydney Office

Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office

2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd

ABN 60 001 179 362

OEH Consultation

Consultation with the OEH was undertaken to confirm that the AHIP could be transferred to Blue Sky, with the alternative development plans. The OEH has confirmed the AHIP transfer will be processed without the need for a new AHIP application (Dr Sam Higgs [OEH] to Dr Tim Owen [GML], email 27 August 2018). This advice is attached to this letter.

Department of Planning Consultation

Consultation with the Department of Planning was undertaken to confirm that the existing ACHAR was adequate to address the project SEARs. The Department of Planning has confirmed the ACHAR is adequate to address the SEARs, stating 'there is no requirement for a further or re-do of an ACHAR' (Bronwyn Smith [DPE] to Dr Tim Owen [GML], email 12 November 2018). This advice is attached to this letter.

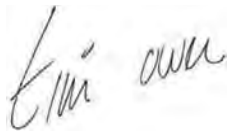
Summary

On the basis of the OEH and Department of Planning advice, we understand the SEARs 7(3) have been met and no further assessment against this SEARs is required.

I trust this provides sufficient advice as to the process and future management requirements for Aboriginal heritage under the SEARs at 4–18 Doncaster Avenue.

Yours sincerely

GML Heritage Pty Ltd

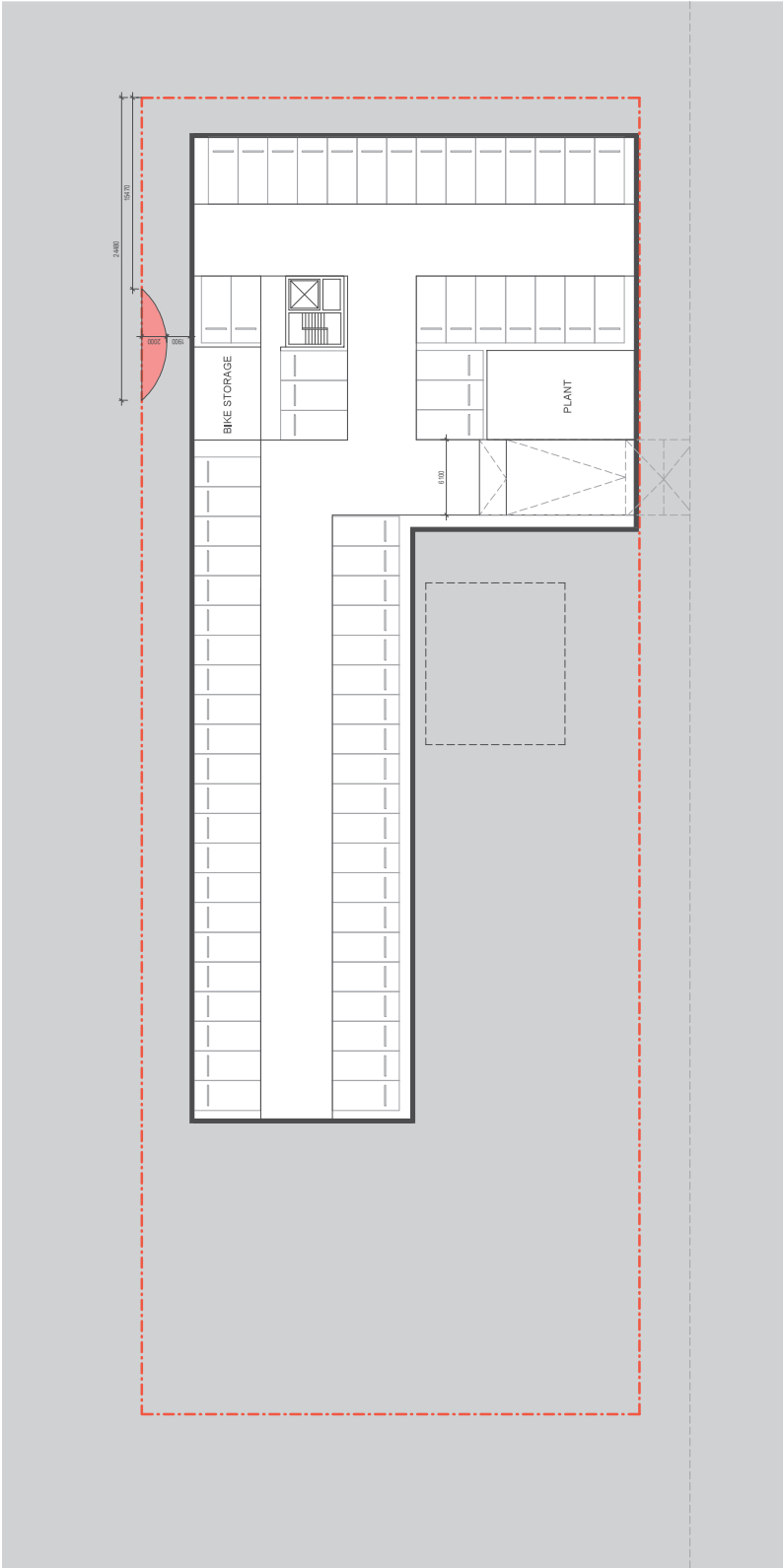
A handwritten signature in black ink, appearing to read 'Tim Owen', written over a light grey rectangular background.

Dr Tim Owen

Principal

Attachments:

- 20180823_4–18 Doncaster Ave_Floor Plans
- OEH advice re: transfer of AHIP, 27 August 2018
- DPE advice re: 4–18 Doncaster Ave – SEARs archaeological items, 12 November 2018



Basement Area: 1,960m²
67 x Double Stacked Spaces: 134
Staff Parking: 4
Total: 138



GFA G Floor = 1950m² approx.

Total GFA = 5975m² approx.

FSR = 1.4 approx.

G FLOOR:

Studios
= 35

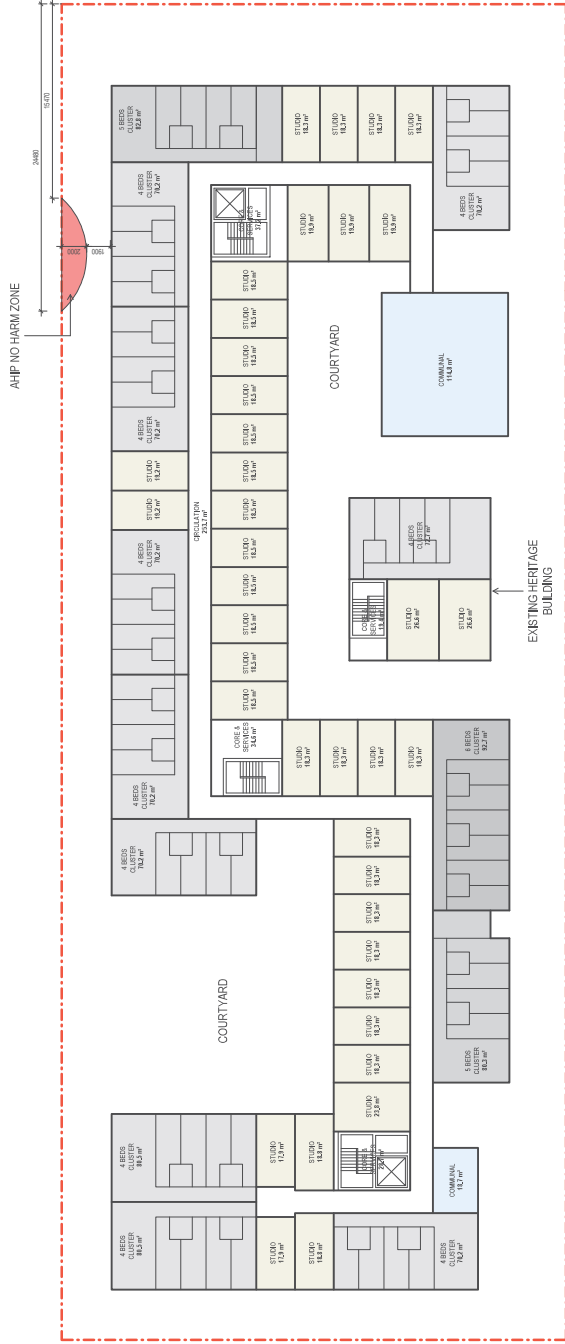
Clusters = 48

Beds = 83

Total Beds for 3 Levels = 267 approx.

Total Communal / Ratio = $411\text{m}^2 / 1.54$

Project Title	Drawing Title	Scale	Project No	Drawing No	Revision	Drawn By	Checked By	Author	Rev	Date	Description
4-DONCASTER AVE KENSINGTON SYDNEY	GROUND FLOOR PLAN	PRELIMINARY ISSUE	2309	TP01							
Label Source : 4175 Spit Street Southbank, VIC 3006 T +61 3 9889 9644 Synopsis : Ground Floor Plan Building Street Size (446, 1559, 2010) T +61 3 9889 9328 Bedrooms : 1 bed 12.24 Closets: 2 Bath: 2 Bath: 24 400 T +61 3 931 9321 Arch: 4400 3400 1831 1831 Horizontal Arch: 1831 1831 1831 Revised: 10/07/2022 David Taylor 01/20											



GFA Level 1 = 2075m² approx.
GFA Level 2 = 1950m² approx.
Total GFA = 5975m² approx.
FSR = 1.4 approx.

LEVEL 1:
Studios = 39
Clusters = 56
Beds = 95
Total Beds for 3 Levels = 267 approx.
Total Communal / Ratio = 411m² / 1.54

LEVEL 2:
Studios = 37
Clusters = 52
Beds = 89
Total Beds for 3 Levels = 267 approx.
Total Communal / Ratio = 411m² / 1.54

Project Title	Drawing Title	Status	Revision	Drawn By	Author	Date	Description
4-DONCASTER AVE KENSINGTON SYDNEY	LEVEL 1 PLAN	PRELIMINARY ISSUE	TP02	Checked By S-44	Author S-44 1:200@A1 22-05-21 1:46:42 AM	Rev 1	
Mail Room : 4/135 Short Street, Southbank, VIC 3006 T: +61 3 9609 3644 Sydney : Granddorm 1-1, Buntingham Street, Burry Hills, NSW 2007 461 2 9869 9329 Brisbane : Level 13/24 Queen Street, Brisbane Qld 4000 +61 7 3211 8621 Richard Leonard 9322, David Tordoff 9323							

Owen, Tim

From: Sam Higgs <Sam.Higgs@environment.nsw.gov.au>
Sent: Monday, 27 August 2018 9:50 AM
To: Owen, Tim
Cc: Edan Norris; Matthew Hill
Subject: RE: OEH Advice re: AHIP C0003723 - AHIMS 4188 - 4-18 Doncaster Avenue - Randwick LGA

Hi Tim,

I've spoken to Susan and a transfer to Blue Sky with a new development approval should be possible. We will need a copy of the new development approval provided in support of the transfer application.

Let me know if there are any other questions.

Regards,

Sam

Sam Higgs BA (Hons) PhD

Archaeologist
Greater Sydney Branch
Communities and Greater Sydney Delivery Division
Office of Environment & Heritage

10 Valentine Avenue, Parramatta 2150
PO Box 644, Parramatta 2124
T 02 9995 6824

From: Owen, Tim [mailto:timo@gml.com.au]
Sent: Friday, 24 August 2018 10:56 AM
To: Sam Higgs <Sam.Higgs@environment.nsw.gov.au>
Cc: Edan Norris <enorris@blueskyfunds.com.au>; Matthew Hill <mhill@blueskyfunds.com.au>
Subject: OEH Advice re: AHIP C0003723 - AHIMS 4188 - 4-18 Doncaster Avenue - Randwick LGA

Dear Sam,

GML, on behalf of Blue Sky, Private Real Estate, seek formal advice with respect to AHIP C0003723.

GML advises that the existing AHIP holder Built, has sold the whole site encompassing 4-18 Doncaster Avenue to Blue Sky.

Blue Sky will soon be submitting to Council a new DA for the property, for a different development from that previously approved. Plans showing this development are attached. Blue Sky are aware of the requirements for Aboriginal heritage under the AHIP. The attached plans detail the extent of site RSY1, the conservation area, and the proposed development footprint. The plans demonstrate the site RSY1 will not be impacted by this proposal, as the offsets are identical to that already approved. Blue Sky have committed to the conservation of site RSY1, adhering to the method and location of conservation detailed in the AHIP-contrast AHIP Attachment 2 with Blue Sky design details. They are also aware of, and will enact, all archaeological works required under the AHIP.

We note the AHIP states the 'proposed works' are residential development, but does not reference a specific DA. Blue Sky seek to confirm whether the OEH will transfer the AHIP from Built to Blue Sky, under a new DA for the site; or whether an entirely new AHIP application is required. If the OEH can transfer the AHIP, GML will complete the necessary transfer of AHIP form and submit this to the OEH. Should a new AHIP be required, we seek advice on the scope of reporting and community consultation required for the application.

Your timely advice on the matter would be appreciated.

Regards
Tim

Dr Tim Owen | Principal

GML Heritage

Level 6 372 Elizabeth St, Surry Hills NSW 2010

T Direct: 02 9318 7578 | T Reception: 02 9319 4811 | www.gml.com.au



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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Owen, Tim

From: Bronwyn Smith <Bronwyn.Smith@environment.nsw.gov.au>
Sent: Monday, 12 November 2018 11:08 AM
To: Owen, Tim; Matthew Hill
Cc: Edan Norris; Ashleigh Ryan
Subject: RE: 4-18 Doncaster Ave - SEARs archaeological items

Good Morning Tim,

Please be advised the OEH recommended that SEARs for Aboriginal Cultural Heritage to ensure that an ACHAR was completed. Unfortunately, there was no documentation submitted with the SEARs to advise that an ACHAR had been completed. As discussed OEH has issued an AHIP for the site, therefore there is no requirement for a further or re-do of an ACHAR.

It is suggested that a copy of all the relevant documentation be submitted to DPE as part of the exhibition material. However, as discussed please note that OEH will need a transfer application to be submitted.

Kind Regards
Bronwyn

From: Owen, Tim <timo@gml.com.au>
Sent: Wednesday, 7 November 2018 11:53 AM
To: Matthew Hill <mhill@blueskyfunds.com.au>; Bronwyn Smith <Bronwyn.Smith@environment.nsw.gov.au>
Cc: Edan Norris <enorris@blueskyfunds.com.au>; Ashleigh Ryan <aryan@urbis.com.au>
Subject: RE: 4-18 Doncaster Ave - SEARs archaeological items

Dear Bronwyn

Thank you for your time on the phone today. This email concerns the project's SEARs and notably Aboriginal heritage and SEARs key issues 7(3) and 7(4).

As discussed the site is subject to an AHIP issued by the OEH (attached)—C0003723. GML recently prepared a full ACHAR and undertook the relevant community consultation. This work was reviewed by the OEH with the outcoming being the issue of the AHIP.

Following transfer in ownership from Built to Bluesky, GML consulted with Dr Sam Higgs with respect to transfer of the AHIP to Bluesky. This communication and OEH's response (27.8.18) is attached.

Bluesky seek confirmation that the AHIP and previously prepared ACHAR documentation entirely satisfy SEARs conditions 7(3) and 7(4), and other then specifying implantation relevant of conditions under the AHIP, the EIS required under 7(1) does not need to further consider Aboriginal heritage—other than refer to the existing documentation.

Further to these aspects, Bluesky recognizes the need for Aboriginal heritage interpretation under Key Issue 3, and the need to protect Aboriginal archaeology and values in association with any works under Key Issues 11(2) and 15(3).

If you would like to discuss these matter further, please give me a call.

Regards
Tim

Dr Tim Owen | Principal

GML Heritage

Level 6 372 Elizabeth St, Surry Hills NSW 2010

T Direct: 02 9318 7578 | T Reception: 02 9319 4811 | www.gml.com.au



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Issue of Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974



Office of
Environment
& Heritage

Your reference:

Our reference: AHIMS No. 4188 / SF17/43344

Notice number: C0003765

Contact: Sam Higgs, 9995 6824

Randwick Property Development Pty Ltd
Level 7, 343 George Street
Sydney NSW 2000

NOTICE OF THE ISSUE OF ABORIGINAL HERITAGE IMPACT PERMIT C0003723

Issued pursuant to section 90C(4) of the *National Parks and Wildlife Act 1974*

BACKGROUND

- A. Randwick Property Development Pty Ltd (the applicant) applied to the Office of Environment and Heritage (OEH) under section 90A of the *National Parks and Wildlife Act 1974* (NPW Act) for an Aboriginal Heritage Impact Permit (AHIP). The AHIP application was in relation to harm to AHIMS 45-6-3245 as a result of a proposed residential development at 4-18 Doncaster Avenue, Randwick. The application also proposes to protect the portion of AHIMS # 45-6-3246 (RSY1) present within the application area from harm in perpetuity.
- B. OEH received the application on 11 September 2018 and further information was received on 20 December 2017, 24 April 2018 and 28 May 2018

ISSUE OF ABORIGINAL HERITAGE IMPACT PERMIT

- 1. OEH has considered the application and supporting information provided, and matters under section 90K of the NPW Act and has decided to issue an AHIP C0003723 subject to conditions.
- 2. The AHIP is attached.
- 3. You should read the AHIP carefully and ensure you comply with its conditions.

It is an offence under section 90J NPW Act to fail to comply with the conditions of the AHIP. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$1.1m. OEH can also issue penalty notices for this offence.

Issue of Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974



Office of
Environment
& Heritage

.....*S. Harrison*.....

Susan Harrison

Senior Team Leader Planning

Greater Sydney

(by Delegation)

Date: *22/06/18*

INFORMATION ABOUT THIS NOTICE

- Details provided in this notice will be available on OEH's Public Register in accordance with section 188F of the NPW Act.

Variation of this AHIP

- This AHIP may only be varied on application by the AHIP holder or by OEH to correct typographical errors or resolve inconsistencies between conditions of the AHIP. A permit can only be varied by subsequent variation notices.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

Aboriginal Heritage Impact Permit

Section 90 of the National Parks and Wildlife Act 1974



Office of
Environment
& Heritage

AHIP number: C0003723

(AHIMS Permit ID: 4188)

AHIP Issued To:

Randwick Property Development Pty Ltd
93 600 948 525
Level 7, 343 George Street
Sydney NSW 2000

OEH Office issuing this AHIP

Office of Environment and Heritage

Regional Operations

Greater Sydney Branch

PO Box 644

Parramatta NSW 2124

Telephone number: (02) 8837 6000

Email: gs.ach@environment.nsw.gov.au

Additional details for public register

a) Name of development or project	4-18 Doncaster Avenue, Kensington
b) Location	4-18 Doncaster Avenue, Kensington NSW 2033
c) Local Government Area(s)	Randwick
d) Description of harm authorised	• Certain Aboriginal objects must not be harmed • Salvage excavations • Harm to certain Aboriginal objects through the proposed works
e) AHIP commencement date and duration	Commencement: 22/06/18 Duration: 5 years

AHIP TO HARM ABORIGINAL OBJECTS

A. Background

- (i) On 11 September 2017 an application was made to the Chief Executive of the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) pursuant to s.90 of the *National Parks and Wildlife Act 1974* (the Act).
- (ii) Additional information was received on 20 December 2017, 24 April 2018 and 28 May 2018.
- (iii) OEH considered the application and supporting information provided, and matters under section 90K of the Act and decided to issue an AHIP subject to conditions.

B. AHIP issued subject to conditions

An AHIP is issued to harm Aboriginal objects identified in Schedules B and C, in accordance with the conditions of this AHIP.

This AHIP is issued pursuant to section 90 of the Act.

C. Commencement and duration of AHIP

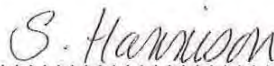
This AHIP commences on the date it is signed unless otherwise provided by this AHIP.

Unless otherwise revoked in writing, this AHIP remains in force for **5 years** from the date of commencement.

D. Proposed Works

Residential redevelopment and associated works.

Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.



SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney

(by Delegation)

DATED: 22/06/18

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LAND TO WHICH THIS AHIP APPLIES

Land shown by hatching in **Attachment 1: Land to which this AHIP applies (outlined in red)**.

CONDITIONS

The conditions of this AHIP specify the actions that are permitted and/or required in relation to areas and Aboriginal objects, which are detailed in the Schedules that follow.

Administrative Conditions

Responsibility for compliance with conditions of AHIP

1. The AHIP holder must ensure that all persons involved in actions or works covered by this AHIP (whether employees, contractors, sub-contractors, agents or invitees) are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the actions relating to this AHIP

2. A suitably qualified and experienced individual must be appointed as a project manager who is responsible for overseeing, for and on behalf of the AHIP holder, all the actions relating to this AHIP.
3. The individual appointed as project manager must be the project manager nominated in the application form.
4. If an alternative to the nominated project manager is appointed, OEH must be notified of their contact details within **14 days** of this appointment.

Actions must be in accordance with AHIP application

5. All actions on the land must be carried out in accordance with the application except as otherwise expressly provided by a condition of this AHIP.

Operational Conditions

Certain Aboriginal objects must not be harmed

6. All human remains in, on or under the land must not be harmed.
7. The Aboriginal objects described in Schedule A must not be harmed.
8. To ensure that the Aboriginal objects described in Schedule A are not harmed, the following measures must be implemented as soon as practicable and complied with:
 - (a) Visual markers must be installed to clearly indicate the location of the Aboriginal objects and 'no-harm area' described in Schedule A, to any person on foot or in a vehicle in the vicinity,

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



Office of
Environment
& Heritage

- (b) Persons entering the land such as employees, contractors, sub-contractors, agents and invitees must be provided with a copy of any Map referred to in Schedule A,
 - (c) Appropriate sediment control measures must be installed, operated and maintained so as to prevent harm to the Aboriginal objects and 'no-harm areas' described in Schedule A,
 - (d) Vehicles must not be driven on or in the immediate vicinity of an Aboriginal object described in Schedule A,
 - (e) Vehicles must not be driven on any part of a 'no-harm area' described in Schedule A,
 - (f) Plant, equipment or any materials including fill, must not be stored on any part of a 'no-harm area' described in Schedule A.
9. To ensure that the Aboriginal objects described in Schedule A are not harmed, the protective structure described in the application and illustrated in **Attachment 2: No harm area (shaded in red)** must be implemented as soon as practicable and complied with.

Salvage excavations

- 10. Salvage excavations may be carried out in, on or under each area described in Schedule B2.
- 11. Aboriginal objects that are recovered during the excavations may be analysed on-site and/or may be taken off-site for further analysis.
- 12. The excavations and analysis of Aboriginal objects must be carried out in accordance with **Attachment 3: Archaeological excavation methodology** that was provided with the application.
- 13. The excavations must be completed in an area before any harm of Aboriginal objects described in Schedule C can commence in that same area.

Harm of certain Aboriginal objects through the proposed works

- 14. The Aboriginal objects described in Schedule C may be harmed. Nothing in this condition authorised harm to Aboriginal objects described in Schedule A (whether human remains, Aboriginal objects or 'no-harm areas').
- 15. Aboriginal objects described in Schedule C must not be harmed unless:
 - (a) all excavations described in Schedule B2 have been completed in the area, and

Temporary storage of certain Aboriginal objects

- 16. Any Aboriginal objects that are removed from the land by actions authorised by this AHIP, must be moved as soon as practicable to the temporary storage location in the table below, pending any agreement reached about the long term management of the Aboriginal objects.
- 17. The temporary storage location is as follows:

Location name:	GML Heritage Offices
Address:	Level 6, 372 Elizabeth Street, Surry Hills, NSW 2010
Storage particulars:	In a secure office

Long term management of certain Aboriginal objects

18. Any Aboriginal objects that are removed from the land by actions authorised by this AHIP, must be reburied as soon as practicable within the location shown in **Attachment 4: Reburial location (hatched in red)**.
19. Requirement 26 "Stone artefact deposition and storage" in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (24 September 2010, available online at: <http://www.environment.nsw.gov.au/licences/archinvestigations.htm>) must be complied with.

Notification and Reporting Conditions

Notification of commencement and completion of actions

20. Written notice must be provided to the OEH office at least **7 days** prior to the commencement of actions authorised by this AHIP.
21. Written notice must be provided to the OEH office within **7 days** of the completion of actions authorised by this AHIP.

Copy of this AHIP and notices to be provided to Registered Aboriginal Parties

22. A copy of this AHIP must be provided to each Registered Aboriginal Party, within **14 days** of receipt of the AHIP from OEH.
23. Where this AHIP is varied or transferred, a copy of the AHIP variation or transfer notice must be provided to each Registered Aboriginal Party, within **14 days** of receipt of the notice.

Human remains

24. If any human remains (other than any human remains described in Schedule B4) are discovered and/or harmed in, on or under the land, the AHIP holder must:
 - (a) not further harm these remains
 - (b) immediately cease all work at the particular location
 - (c) secure the area so as to avoid further harm to the remains
 - (d) notify the local police and OEH's Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location, and
 - (e) not recommence any work at the particular location unless authorised in writing by OEH.

Incidents which may breach the Act or AHIP

25. The AHIP holder must notify the OEH office in writing as soon as practicable after becoming aware of:
 - (a) any contravention of s.86 of the Act not authorised by an AHIP, and/or
 - (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

26. Where OEH suspects that an incident has occurred which may have breached the Act or AHIP, OEH may request a written incident report, which includes the following:
 - (a) the nature of the incident
 - (b) the actual or likely impact of the incident on Aboriginal objects and/or Aboriginal places

- (c) the nature and location of these Aboriginal objects and/or Aboriginal places, referring to and providing maps and photos where appropriate
 - (d) any conditions of an AHIP which may have been breached, and
 - (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.
27. The incident report must be provided to the OEH office within the timeframe specified in the request.

Provision of Aboriginal Site Impact Recording Form

28. An Aboriginal Site Impact Recording Form must be completed and submitted to the AHIMS Registrar, for each AHIMS site identified in Schedules B and C, within **4 months** of the completion of the actions authorised by this AHIP.

Note:

- (i) The Aboriginal Site Impact Recording Form can be found on the OEH website:
<http://www.environment.nsw.gov.au/licences/DECCAHISSiteRecordingForm.htm>
- (ii) Contact details for the AHIMS Registrar can be found on the OEH website:
<http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm>

Report about harm to Aboriginal objects (Salvage Excavation Report)

29. A Salvage Excavation Report must be prepared about the actions relating to the harm of Aboriginal objects (as permitted by this AHIP). The report must:
- (a) include a short summary of the report
 - (b) describe any ongoing consultation with or involvement of representatives of Registered Aboriginal Parties in relation to this AHIP
 - (c) describe how any Aboriginal objects or 'no-harm areas' described in Schedule A were managed during the period covered by the AHIP
 - (d) provide details of the Aboriginal objects which were fully or partially harmed in the course of undertaking the actions
 - (e) provide a description of the methods and results of the salvage excavation
 - (f) detail any community collection of Aboriginal objects undertaken by the Registered Aboriginal Parties
 - (g) comment on the effectiveness of any mitigation measures that were implemented
 - (h) comment on the effectiveness of any management plan which was in place
 - (i) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now at that location
 - (j) detail the results of any analysis of Aboriginal objects
 - (k) detail the long term management arrangements for any Aboriginal objects, and
 - (l) include a statement confirming that all Aboriginal Site Impact Recording Forms have been completed and submitted to the AHIMS Registrar.
30. The Salvage Excavation Report must be submitted to the OEH office within **12 months** of the completion of the actions authorised by this AHIP.
31. A copy of the Salvage Excavation Report, including a summary of the report in plain English, must be sent by registered post to each Registered Aboriginal Party within **14 days** of the report being submitted to OEH.

General Conditions

Indemnity

32. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from:
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any actions undertaken pursuant to this AHIP.

Release

33. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from:
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising from or in connection with any actions undertaken pursuant to this AHIP.

Written notice

34. Any requirement to provide written notice to the OEH office in this AHIP may be complied with by emailing the notice to the OEH office's email address or by sending by registered post to the OEH office's address. The OEH office's contact details are specified at the front of this AHIP.

SCHEDULES

The following schedules identify the areas and Aboriginal objects that are subject to the conditions of this AHIP.

Schedule A: Aboriginal objects which must not be harmed

A1 Human remains

All human remains in, on or under the land must not be harmed, other than any human remains identified in Schedule B4, as specified by the conditions of this AHIP.

A2 Aboriginal objects that are identified on AHIMS

The following Aboriginal objects identified on AHIMS must not be harmed, as specified by the conditions of this AHIP.

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction ? (Y/N)	Easting	Northing	Datum
Whole	45-6-3246	artefact	RSY 1	N	336060	6242862	GDA

A3 No-harm areas

Area name	Information access restriction? (Y/N)	Map Reference
RSY 1	N	The area shaded red in Attachment 2: No harm area

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Schedule B: Aboriginal objects that may be harmed through the certain actions

B1 Movement only

Not applicable

B2 Salvage excavations

Salvage excavations may be carried out in accordance with the conditions of this AHIP.

The salvage excavation area comprises the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	45-6-3245	PAD	Doncaster Ave PAD	N	336037	6246916	GDA

B3 Community collection

Not applicable

B4 Other

Not applicable

Schedule C: Aboriginal objects which may be harmed through the proposed works

The Aboriginal objects described in this schedule may be harmed, but only in accordance with the conditions of this AHIP (excluding any Aboriginal objects described in Schedule A).

C1 Harm of Aboriginal objects identified on AHIMS

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	45-6-3245	PAD	Doncaster Ave PAD	N	336037	6246916	GDA

C2 Areas where harm of Aboriginal objects is authorised

All Aboriginal objects in, on or under the land which is identified at **Attachment 1: Land to which this AHIP applies (outlined in red)** excluding the area identified at A3 of this AHIP and marked in red on the map.

DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object	has the same meaning as in the Act.
Act	means the <i>National Parks and Wildlife Act 1974</i> .
AHIMS	means the Aboriginal Heritage Information Management System maintained by OEH, as defined in s.90Q of the Act.
AHIP	means Aboriginal Heritage Impact Permit
AHIP holder	means the entity or person listed on the cover page under the heading "AHIP issued to".
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Community collection	means the collection of Aboriginal objects by one or all Registered Aboriginal Parties or their representatives.
Community collection area	means an area described as a community collection area in Schedule B3
Harm	has the same meaning as in the Act. In relation to Aboriginal objects, harm means the movement, damage, defacement and/or destruction of Aboriginal objects. In relation to an Aboriginal place, harm means the damage, defacement and/or destruction of the Aboriginal place.
Land	means the land described under the heading "Land to which this AHIP applies".
No-harm areas	means those areas described in Schedule A3.
OEH	Office of Environment and Heritage (NSW).
OEH office	means the office listed on the cover page of this AHIP.
Proposed works	means the works described under the heading "D. Proposed Works" at the front of this AHIP.
Public register	means the public register established under s.188F of the Act, that contains details of AHIPs issued by the Chief Executive of OEH, as described under the heading "Information about this AHIP".
Registered Aboriginal Parties	means the Registered Aboriginal Parties listed in the application.
Salvage excavation	means an archaeological excavation carried out in accordance with the methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of salvage excavation is to recover a sample of Aboriginal objects as an archival record of Aboriginal life from a site that will be destroyed.
Salvage excavation area	means any area described as a salvage excavation area in Schedule B2.
Test excavation	means an archaeological excavation carried out in accordance with

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methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of test excavation is to collect a sample of Aboriginal objects, in order to establish the nature and extent of sub-surface Aboriginal objects and to assist in the assessment of management options for the site.

Test excavation area means any area described as a test excavation area in Schedule B2

INFORMATION ABOUT THIS AHIP

Public Register

Under section 188F of the Act, the Chief Executive of OEH is required to keep a public register containing the details of each AHIP issued. The details of this AHIP that will be published on the public register are outlined on the front page of this AHIP.

The public register is available online at www.environment.nsw.gov.au

Appeals

Under section 90L of the Act, the AHIP holder may appeal to the Land and Environment Court if they are dissatisfied with any condition of this AHIP. The appeal must be lodged within 21 days of the date this AHIP was issued.

Penalties for breach of the Act or AHIP condition

Significant penalties can be imposed by the Land and Environment Court for harm to an Aboriginal object or Aboriginal Place other than as authorised by a condition of an AHIP, or for a breach of an AHIP condition. OEH can also issue penalty notices for a breach of the Act or AHIP condition.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the *National Parks and Wildlife Act*

Newly identified Aboriginal objects must be notified to the Chief Executive of OEH under s.89A of the Act using the form available online at www.environment.nsw.gov.au

Stop work orders, interim protection orders and remediation directions may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the OEH office for a variation of any conditions of an AHIP, using the AHIP variation application form available online at www.environment.nsw.gov.au. Requests for significant variations must be accompanied by evidence of further consultation with Registered Aboriginal Parties and may include payment of fees.

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The conditions of an AHIP may be varied at any time by the Chief Executive of OEH in order to correct a typographical error or to resolve an inconsistency between conditions. The AHIP holder may appeal a decision of the Chief Executive of OEH to vary the conditions of the AHIP.

Transfer of AHIP

The AHIP holder may apply to transfer this AHIP to another person by using the AHIP transfer application form available online at www.environment.nsw.gov.au.

Surrender of AHIP

The AHIP holder may apply to surrender this AHIP by using the AHIP surrender application form available online at www.environment.nsw.gov.au. The surrender must be approved by the Chief Executive of OEH and may be subject to conditions.

Suspension and revocation of AHIP

An AHIP may be suspended or revoked at any time at the discretion of the Chief Executive of OEH. Prior to suspending or revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Disclosure of information pursuant to lawful requirement

This AHIP does not prevent the disclosure of any information or document in OEH's possession in accordance with any lawful requirement.

Making copies of reports

By providing a report, the AHIP holder acknowledges that OEH can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

OEH is able to make copies of any reports provided to OEH under this AHIP.

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Attachment 1: Land to which this AHIP applies (outlined in red).



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Attachment 2: No harm area (shaded in red)



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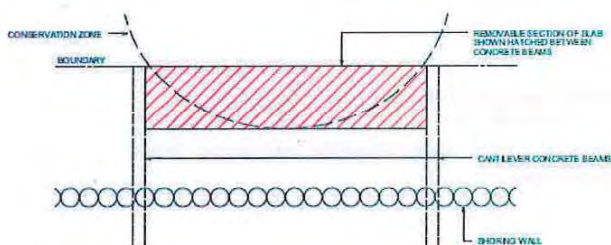
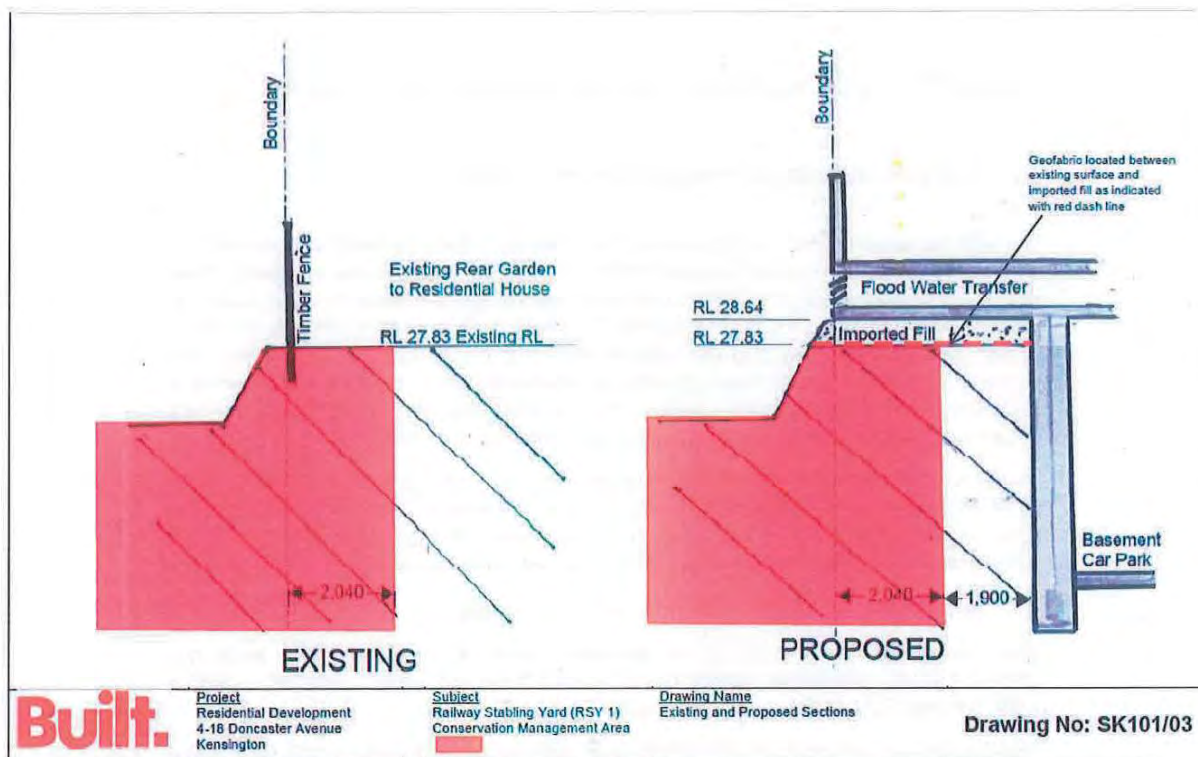


FIGURE 1 - PLAN
CONSERVATION MANAGEMENT AREA

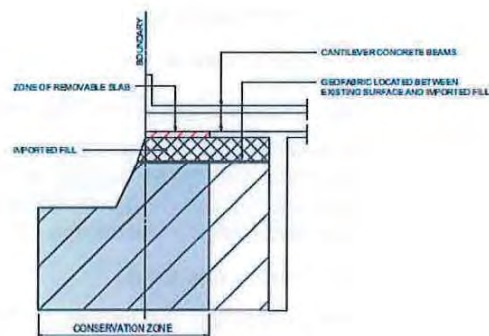


FIGURE 2 - SECTION
STRUCTURE OVER CONSERVATION MANAGEMENT AREA

Attachment 3: Archaeological excavation methodology

E. Archaeological Research Design (ARD)

This ARD has been designed to enable archaeological excavation of archaeological deposits that may occur within the substrate of the Doncaster Ave PAD. Based on GML's existing knowledge of the stratigraphic architecture of the substrate a procedure was developed to maximise the probability of identifying and recovering archaeological deposits. The procedure also aimed to minimise the possibility of damage to the fragile substrate that would likely occur if separate phases of excavation were conducted. An iterative approach was adopted which utilised methods in sequence from non-invasive to invasive, leading to immediate salvage excavation. The existing knowledge used to develop the field procedure derives from field investigations implemented at the adjacent site RSY 1.

The methods included in the field procedure have previously been utilised during investigations by GML either at the adjacent RSY 1 site, or sites equivalently located on the Botany Sands. A level of confidence therefore exists with respect to the outcomes of the proposed field procedure. The background environmental context for the work is detailed in the main report and has not been repeated here.

E.1 Mechanism for Archaeological Test Excavation

Given the developed nature of the site, the deep sand substrate, the instability of these sands once excavated and the potential for flooding, it is not possible to conduct archaeological test excavation under the Code;¹ a Section 90 permit is therefore required.

The investigations and processes to be implemented under a Section 90 permit include the following stages:

- demolition and monitoring of existing buildings from across the site;
- geophysical survey (non-intrusive);
- borehole survey; and
- archaeological salvage.

E.2 The Investigation Methodology

The archaeological sampling strategy to be employed during the Doncaster Avenue project is based upon the methodology for sampling, as presented by Orton.² Orton presents a 12-step process³ for determining a suitable process of sampling and to provide a suitable test excavation methodology. This methodology, following Orton's categories, is presented below.

E.2.1 Existing Knowledge

Existing knowledge of the Doncaster Ave PAD is presented in the main report and includes AHIMS data and prior reports, environmental context, impacts to the study area, and the outcomes of the investigations for RSY1. The information demonstrated that the substrate at the Doncaster Ave PAD is deep and, notwithstanding the obstruction of the existing infrastructure, could not be adequately investigated using the procedures outlined in the Code.⁴ It was also apparent that the substrate is very fragile and may suffer from damage if a staged procedure of test followed by salvage excavations is implemented. The site has a high potential for flooding; once opened any archaeological test units would collapse if flooded. This would result in the immediate and permanent loss of any unexcavated adjacent archaeological deposit.

The methodology developed addresses these issues by utilising a defined series of stages with increasing iterations of invasiveness, each stage informing the sampling design of the next. The progression of stages is ultimately designed to clarify whether an archaeological deposit is present (or not) and recover it.

E.2.2 Objectives (and Research Questions)

The fundamental objective of the geoscientific surveys and archaeological excavation of the Doncaster Ave PAD is to undertake sufficient work to allow the extent, content, condition, and integrity of archaeological deposits to be assessed to determine the locations where salvage excavation is required. A methodology for salvage is provided, which responds to the risks posed by excavation within sand dunes.

In order to reach this objective a number of research questions have been established, to guide the archaeological process and provide the basis for questioning the data collected. Relevant research questions include:

1. Is there a subsurface deposit present?
 - a. Does the stratigraphic architecture of that deposit differ across the Doncaster Ave PAD?
 - b. What is the condition and integrity of the deposit? How has it been impacted by the historical activities that are known to have affected the adjacent site RSY 1?
 - c. If archaeological materials exist, are they stratified within the sand deposits?
 - d. Is there a stratified palaeoenvironmental record? Can it be temporally correlated with archaeological materials, where they exist?
 - e. How old is the deposit? Can it be dated by geochronological methods?
2. How can the deposit be interpreted?
 - a. What are the physical attributes of the deposit (eg stone, carbon, clay or other, contact period items)?
 - f. For stone deposits, what are the physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types across the Doncaster Ave PAD or between stratigraphic units?
 - g. For contact period deposits, what are the characteristics and how do they describe interaction and relationships with the new colony? To what period do the contact items date (glass and ceramic typologies)? Does material use represent continued application of traditional Aboriginal techniques, or adaptation to the new materials?
 - b. Do the deposits provide evidence for intra-site patterning?
 - c. Does that patterning lend itself to interpretation? Can the interpretation be used to support the notion of Aboriginal traditions and prior landscape use?
 - d. How does the subsurface deposit compare to that found over the Botany Sands substrate?
3. Can the archaeology be interpreted in a regional context?

- a. Where did raw stone materials originate from? Have they been brought into the study area? From how far away has the stone been brought?
 - b. Is there evidence of trade in connection to stone deposits?
4. Is the archaeological deposit culturally significant?
 - a. What is the heritage value of the deposit, both scientifically and culturally?
 - b. How does the Aboriginal community view and value the deposit identified?
5. What are the implications for other nearby areas?
 - a. Beyond RSY 1, are there other archaeological deposits in the local area?
 - b. How well has this process identified and characterised the deposit? And can it be applied to other future development areas?

E.2.3 Population

The targeted population is defined by the stratigraphic architecture occurring within the study area boundary. Archaeological sampling will be targeted to those areas that can be shown to have intact pre-European geological deposits and that do not pose a danger to the fieldworkers (eg at depths dangerous for hand excavation). At the southeast of the study area a conservation management zone will not be excavated and will instead be preserved indefinitely (Appendix D).

Salvage excavation will occur at locations shown to be composed of intact strata, with an archaeological signature, using an initial grid pattern of exploratory 1m squares, and immediately expanding laterally if cultural materials (sufficient to warrant further investigation, see Section E2.6 for trigger points) are identified.

E.2.4 Data to be Collected

Data will be collected for each square during salvage excavations using a context sheet based on the terminology of the CSIRO.⁵ Data collected on context sheets will include: a square identifier, depths, colour, texture, strength, moisture, structure and inclusions. In addition, schematic drawings and a photographic record will be acquired for each excavated square. Aboriginal objects recovered during excavation will be rudimentarily analysed for material type and backing and used to inform the direction of salvage expansion.

E.2.5 Degree of Precision Required

The precision of acquired data in the adopted approach increases iteratively for each sequential method applied. This ranges from broad remote sensing of the geological substrate to the excavation and sampling of features occurring within an excavated spit. Precision is purposefully increased as the sample population decreases in size.

E.2.6 Method of Measure (Excavation Threshold/Trigger Points)

The 'background' density of Aboriginal objects within the study area is based on prior knowledge from excavations of the adjacent site RSY 1. At that site, Aboriginal objects occurred in a frequency whereby a lower threshold (trigger point) of five objects per horizontal metre square (counted by truncating all intact stratigraphical layers) was used to cease lateral expansion.

For the Doncaster PAD, objects are defined as stone artefact with identifiable landmarks, not angular fragments. The trigger point (threshold) for the commencement or cessation of archaeological excavation is five objects, recovered within one metre square, from all combined intact stratigraphical layers (excluding fill layers).

Other significant deposits, such as hearths, oven/fire pits, heat retaining stone, contact period objects etc, may also occur and will be investigated irrespective of the associated stone artefact deposit, as they could reflect domiciliary areas. The presence of these items is a trigger point for further excavation.

E.2.7 The Framework for Sampling

The sampling procedure uses an iterative and sequential approach, where each method utilised is less invasive than and informative to the implementation of the next method. The approach aims to maximise knowledge of the stratigraphic architecture of the study area while minimising impact to it. Once the stratigraphic architecture is known, salvage excavations can be commenced immediately while maximising the recovery of Aboriginal cultural materials.

Demolition

Demolition of existing infrastructure will be directed and implemented by Built or an approved representative. GML and a RAP will be present for the duration of the demolition works and will direct demolition works to stop if damage to intact geological deposits is deemed likely to occur. The site should be made as level and obstruction-free as is possible without causing impact to intact pre-European geological deposits.

Given the layer of fill covering the site, this methodology should be able to remove all existing structures and services, whilst leaving the majority of fill in place, and the underlying dune layers in the condition pre-demolition.

Geophysical Survey

Ground-penetrating radar (GPR) survey will be conducted across the study area once demolition works are complete. Antennae approximately 500MHz will be used to allow visualisation of the subsurface architecture. Rectangular grids will be established over each cleared area to maximise coverage of the study area. Survey lines will be measured within each grid at up to 2m transect spacings. The acquired data would be processed into two-dimensional radargrams and analysed for stratigraphic boundaries and subsurface objects. The two-dimensional radargrams for each grid would also be compiled into three-dimensional time-slices to enable a plan-view analysis of the subsurface.

Borehole Sampling

The geophysical results will guide the sampling pattern for a borehole survey. Where the geophysical imagery indicates a consistent profile of stratigraphy across the site then a regular grid or offset grid of up to 20m spacing will be sampled evenly over the site (this spacing was successfully used at RSY 1).

Where the geophysical imagery suggests discrete locations of variable subsurface stratigraphy then boreholes would alternatively be placed to sample each zone of variation. The stratigraphic profiles of the collection of boreholes would be used to construct a stratigraphic subsurface model of the study area using the principles of sequence stratigraphy.

Archaeological Salvage

The geological model of the substrate developed from the geophysical and borehole data will be used to guide a sampling strategy for salvage excavation. Only areas identified as including intact geological deposits will be targeted for salvage excavation.

For each discrete area of modelled intact geological deposit (a sample location), the following steps will be undertaken.

- Layers of fill will be mechanically removed under supervision of the excavation director. The extent of fill removed from each sample location will be sufficient to allow safe consequent archaeological excavation. Fill will be stockpiled on site, away from the excavation areas, and/or removed by the proponent. No further sampling, sieving or archaeological work would be undertaken on any fill layers.
- At each sample location, a 1m exploratory square will be excavated at the approximate centre.
- Further exploration squares will be placed around the central square, displaced laterally up to 20m in a grid or grid offset pattern and excavated in the manner listed previously. At most, this would result in the entire Doncaster Avenue PAD being sampled on a 20m square grid.
- Excavation will proceed stratigraphically by hand, in 10cm spits or by stratigraphy, whichever is thinner, to a maximum depth of 150cm, or to a depth otherwise deemed to be safe for the hand excavator and/or able to maintain stability of excavation baulks. This decision will be made by the excavation director and/or Built.
- Wherever an intact dune topsoil unit is encountered during excavation of exploration squares, spit thicknesses through the unit would be reduced to 2cm. Once the dune top soil unit is removed, spit depth can return to 10cm or apparent stratigraphy.
- Exploration square excavation would continue to a depth at which the basal 20cm of a square can be demonstrated to contain zero Aboriginal objects. The decision to cease excavation will be the excavation directors. At a minimum each exploratory square will be excavated 20cm depth.
- A representative from OEH would be invited to attend the site prior to or immediately commencing lateral expansion to allow observation of the exploratory squares and discussion of the likely pattern of expansion.
- The recovery of Aboriginal objects, and/or any Aboriginal archaeological features, from an exploration square will trigger lateral hand expansion of that square if the threshold/trigger point is reached. Lateral expansion will continue until the threshold of less than five Aboriginal objects per metre square are being recovered (Section E2.6 defines the trigger point and an Aboriginal object). When the trigger point is no longer met, lateral expansion will cease in that sample location. The decision to cease lateral expansion will ultimately be the excavation directors. Lateral expansion spit depth will depend on the nature of the deposit:
 - Undifferentiated sand layers with an archaeological deposit will be excavated in 10cm spits or by stratigraphy, whichever is thinner, to a maximum depth of 150cm, or to a depth otherwise deemed to be safe (refer above).
 - Intact dune topsoil units will be excavated in the reduced spit thickness of 2cm.

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- Archaeological features will be stratigraphically hand excavated and recorded separately from a spit or other stratigraphic unit.
- Should more than five discrete area of modelled intact geological deposit (all containing a deposit which meets the threshold for lateral expansion), and/or the defined total combined extent of the Aboriginal deposit be described over an area exceeding 500m²; the excavation director, OEH, Built and RAPs may need to develop a lateral expansion sub-sampling strategy. The need to sub-sample will be based on recovery of a suitably sized representative archaeological deposit and reasonability in terms of costs associated with the work.
- The depth for the excavation of archaeological deposits is dependent on the stability of the dune in any specific location. If the dune is unstable, preventing hand excavation, and contains an archaeological deposit which meets the trigger points, mechanical excavation may be used as an alternative excavation technique (see below).
- Where Aboriginal objects are found in the lowest hand-excavated spit, benching may need to be undertaken to permit continued hand excavation to deeper levels. Benching through layers with an archaeological deposit may be necessary. If so, the mode of mechanical excavation will follow the mechanical excavation methodology described below.
- Each spit excavated by hand would be passed through a 3mm sieve. All Aboriginal objects will be retained for further analysis. All non-Aboriginal material, with the potential to be contact period objects, will be counted, retained and archived for analysis.
- Wet sieving would be conducted into skips or some other appropriate container to prevent accumulation of water at the ground surface and potential overland flow beyond the study area boundaries. Skips would be emptied on-site at strategic locations to prevent surface water pooling. Should percolation be insufficient to prevent surface water pooling then the skip contents would be transported off-site.
- The following mechanical excavation methodology may be required:
 - Where no (or very few) Aboriginal objects are found to be contained within any exploration squares (and no lateral hand expansion is proposed), strip trenches would be excavated mechanically at locations decided by the excavation director. Trenches would be excavated at 20cm spits to a depth of 150cm. Approximately a quarter of each bucket would be sieved, with the remainder to be sieved should five or more Aboriginal objects be recovered from the first quarter.
 - The same mechanical excavation methodology may be used if: deep excavation (+1.5m) is required; and/or the excavation conditions become unsafe; and/or benching through a layer with an archaeological deposit is required to reach deeper layers and make the site safe.
- Geological samples potentially including but not limited to particle-size analysis, soil micromorphology and plant-organic content will be recovered from an appropriate profile to characterise the soil and/or stratigraphic profile.

- Where a moist organic deposit is found within the intact stratigraphy it will be sampled vertically using PVC pipe for potential pollen analysis. One location will be sampled at a minimum should multiple organic deposits be found.
- Should human skeletal material be identified during the test excavation, work will cease in the immediate area and OEH and the NSW Police Department will be notified.

Development

On completion of salvage excavation, as outlined above, the excavation director will provide a written sign-off to Built indicating that the field investigation defined in an associated AHIP has been satisfied. At this point Built will be able to commence development of the site in accordance with the approved DA. No further AHIP will be required.

E.2.8 Pre-Test or Pilot Survey

Orton notes that the best survey designs can be made when the survey is over and that a pilot survey can serve to remove some of the 'bugs' from the sampling process.⁶ The sampling procedure outlined previously integrates pre-test, or pre-survey, into its design. Each sampling method applied builds on the knowledge of the previous method and informs the design of the next method. The Aboriginal representatives and field archaeologists will be able to collaboratively respond to the results of each method to enhance the design of the next method.

The proposed methodology has been tested during works on the adjacent Randwick Stabling Yards, where it was found to be suitable for investigation of the sand dunes in this area.

E.2.9 Organisation

The demolition monitoring, geophysical survey, borehole sampling and salvage excavation will be undertaken by a team which will include an archaeological excavation director, a qualified geoscientist, four field archaeologists and four Aboriginal representatives (from the Registered Aboriginal Parties [RAP]). A mechanical excavator operator will also be required.

One geoscientist and one RAP will conduct the demolition monitoring, geophysical survey, and borehole sampling. Salvage excavations will be inclusive of the remainder of the team with two people per square hand excavating, and four people sieving.

E.2.10 Summary and Analysis

Following salvage excavation, a technical report will be prepared that contrasts the Doncaster Avenue outcomes against other recent local excavations. If no Aboriginal objects are identified, the report will provide an overview of the techniques applied and their appropriateness.

If Aboriginal objects/sites are identified, the report will provide a synopsis of the sites, their stratigraphical and geomorphological context and provide an overview of the techniques applied and their appropriateness. Any recovered Aboriginal stone objects will be subject to specialist analysis. Recording of all relevant attributes will be undertaken in a comparable manner to other regional lithic studies and in accordance with Holdaway and Stern (2004). Contact period objects would be analysed by a specialist in each field (eg glass or ceramic), taking into account Aboriginal working techniques.

Where required, geological and geospatial analysis will be conducted by GML. Analysis of other materials recovered during field investigations (eg pollen, carbon samples etc) will be undertaken by an

external contractor where required. All other reporting and GIS analysis will be undertaken by GML, assisted by the field archaeologists present during the salvage excavation.

The field investigation report will be provided to the RAPs for review and comment. Following their review the report will be forwarded to the OEH.

All Aboriginal objects will be subject to appropriate management. It is proposed that objects would be reburied directly adjacent to (abutting) the RSY 1 conservation area. The reburial location (measuring 1m square) would be registered as a separate Aboriginal site (termed 'Doncaster Avenue objects reburial location') and managed concurrently with the site RSY 1. Reburial was the nominated method of management from certain Aboriginal community members. However, should the Aboriginal community wish for alternative object management post excavation, a variation to the AHIP can be sought.

An Aboriginal heritage plan of management would be prepared for the continuing protection of the conservation management area. This should contain develop management requirements for any Aboriginal objects recovered and provide means for the public interpretation/dissemination of the work's outcomes and findings. The Aboriginal HMP would form a component of the post excavation report.

E.2.11 Information Gained for Future Survey

The information derived from salvage excavation will be used as the basis for the further development of the heritage values assessment relating to the study area. The report will provide direction for future management and conservation of Aboriginal heritage in the local area.

E.3 Endnotes

- ¹ (OEH) DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010), pp 24–28.
- ² Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge.
- ³ Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, pp 27–39.
- ⁴ (OEH) DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010), pp 24–28.
- ⁵ The National Committee on Soil and Terrain, 2009, *Australian Soil and Land Survey Field Handbook*, third edition, CSIRO Publishing, Melbourne.
- ⁶ Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, p 29.

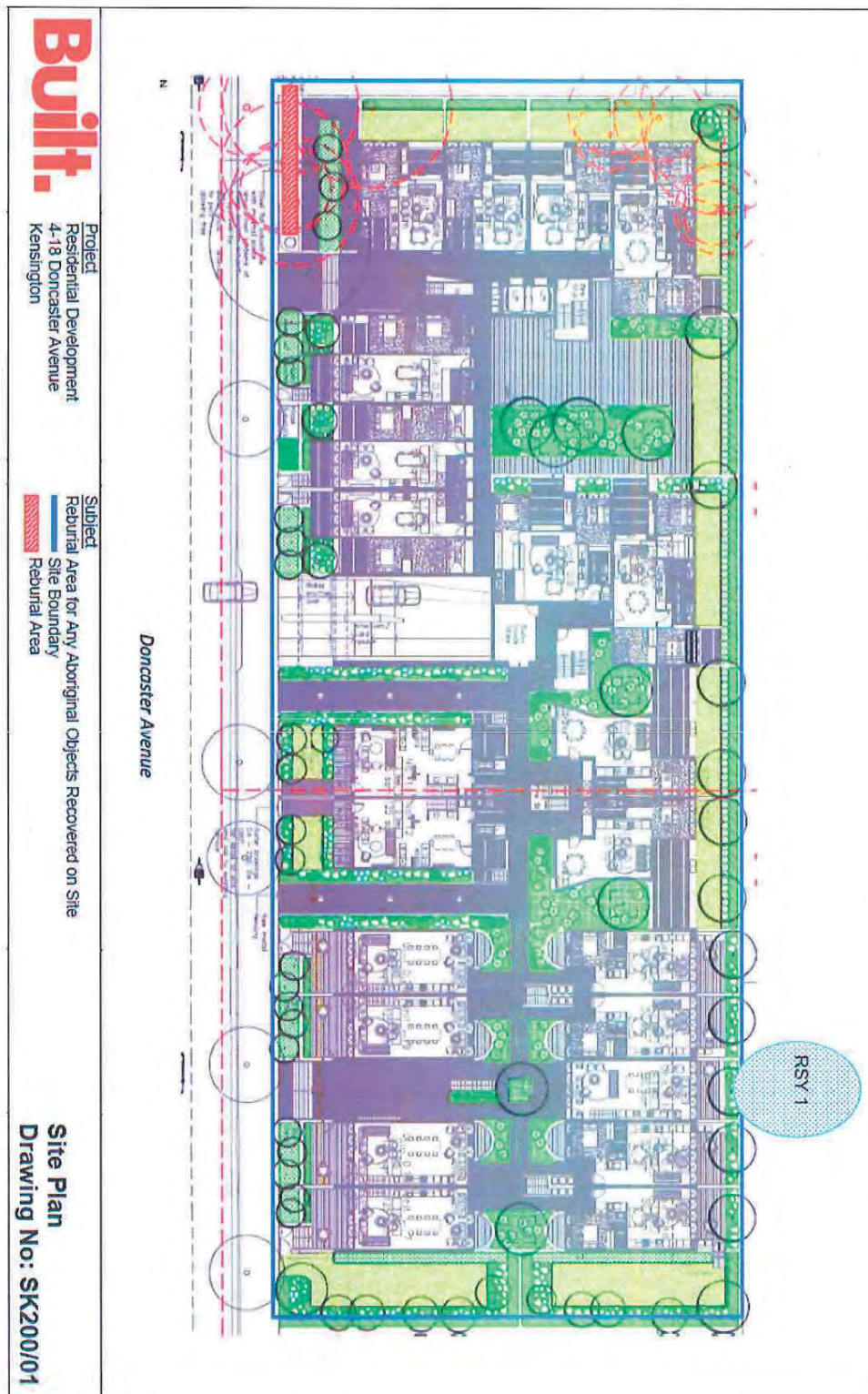
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Attachment 4: Reburial location (hatched in red)



4–18 Doncaster Avenue, Kensington
Aboriginal Cultural Heritage Assessment Report

Report prepared for Built Pty Limited

September 2017



Sydney Office Level 6 372 Elizabeth Street Surry Hills NSW Australia 2010 T +61 2 9319 4811

Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540

GML Heritage Pty Ltd ABN 60 001 179 362

www.gml.com.au

Report Register

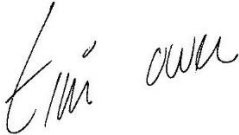
The following report register documents the development and issue of the report entitled 4–18 Doncaster Avenue, Kensington—Aboriginal Cultural Heritage Assessment Report, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
17-0058A	1	Draft Report	14 July 2017
17-0058A	2	Updated Draft Report	24 July 2017
17-0058A	3	Final Report following RAP review	6 September 2017

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Sam Player	Project Director & Reviewer:	Tim Owen
Issue No.	3	Issue No.	3
Signature		Signature	
Position:	Consultant	Position:	Senior Associate
Date:	6 September 2017	Date:	6 September 2017

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Appendix A

Aboriginal Community Consultation Log

Appendix B

New AHIMS Site Cards

Appendix C

DA Application Drawings

Appendix D

Conservation Management Area Design Plans

Appendix E

Archaeological Research Design

1.0 Introduction

GML Heritage Pty Ltd (GML) was engaged by Built Pty Limited (Built) to prepare an Aboriginal cultural heritage assessment report (ACHAR) for the 4–18 Doncaster Avenue, Kensington, project (the study area). This report forms part of the Environmental Assessment for the study area prepared under Part 4 of the *Environmental Planning and Assessment Act 1979* (NSW).

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage archaeological sites, places, objects, landscapes and/or values, in accordance with the NSW Office of Environment and Heritage (OEH) guidelines for Aboriginal heritage assessment (listed below).

This report provides a significance assessment of the identified archaeological Aboriginal sites, places, landscapes and/or other values. An impact assessment and management recommendations are provided to assist Built with its future responsibilities for the management of Aboriginal cultural heritage inline with the statutory of the provisions of the *National Parks and Wildlife Act 1974* (NSW).

1.1 The Study Area and Proposed Activity

The study area is located within the Randwick local government area in the parish of Alexandria at 4–18 Doncaster Avenue, Kensington (Figure 1.1). Built proposes to demolish existing dwellings at 4–8, 14, and 16 Doncaster Avenue and the non-heritage rear portion of the existing terraces to 10 and 12 Doncaster Avenue and construct a new three-storey residential flat building comprising of 48 dwellings and a basement carpark for 71 vehicles. The existing heritage front portion of terraces at 10 and 12 Doncaster Avenue will be retained and refurbished. A small conservation area for an Aboriginal site (RSY 1) will also be located within the southeast of the study area.

1.1.1 DA Approval DA/931/2015

A development application for the proposed work has been approved by the Randwick Council (DA/931/2015). The DA provides the layout and intended impacts of the project, and detailed the need for Aboriginal heritage assessment and management. The DA is included with the Aboriginal Heritage Impact Permit application for the project (Appendix D).

1.2 Statutory Context

In NSW, Aboriginal heritage is principally protected under two Acts:

- the *National Parks and Wildlife Act 1974* (NPW Act); and
- the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2.1 National Parks and Wildlife Act 1974

The NPW Act provides statutory protection for all Aboriginal ‘objects’ (consisting of any material evidence of the Indigenous occupation of New South Wales) under Section 90 of the NPW Act, and for ‘Aboriginal places’ (areas of cultural significance to the Aboriginal community) under Section 84 of the NPW Act. Aboriginal objects and places are afforded automatic statutory protection in New South Wales whereby it is an offence (without the Minister’s consent) to harm an Aboriginal object or declared Aboriginal Place.

The NPW Act defines an Aboriginal object as:

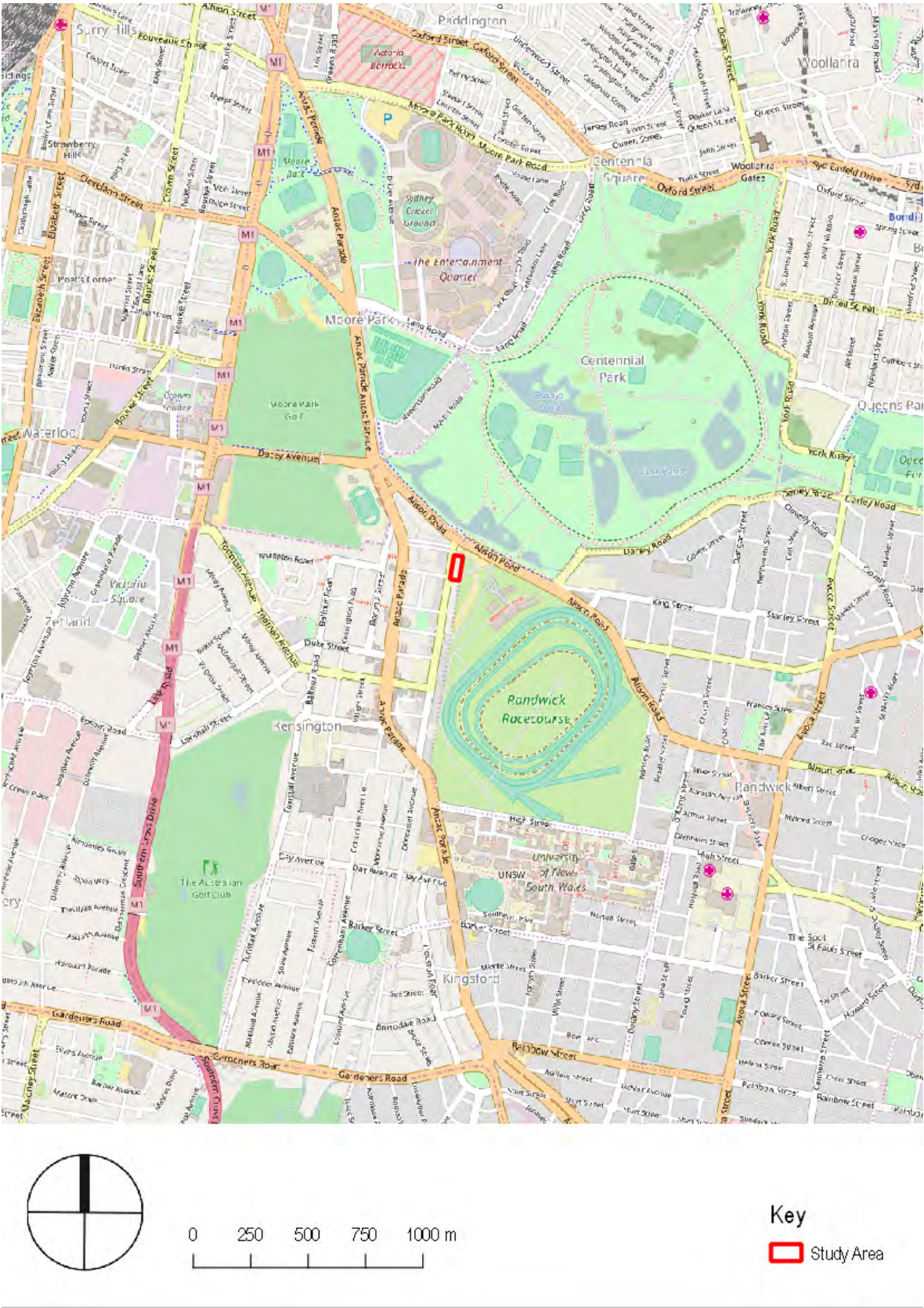


Figure 1.1 Study area at 4–18 Doncaster Avenue, Kensington, within its urban context. (Source: Open Street Maps with GML additions, 2017)

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

The protection provided to Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. However, areas are only gazetted if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

A strict liability offence applies for harm to or desecration of an Aboriginal object or declared Aboriginal Place.¹ The definition of 'harm' includes destroying, defacing, damaging or moving an Aboriginal object or declared Aboriginal Place. The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to the proposed development are the statutory defence of due diligence through complying with an adopted industry code or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

The potential for Aboriginal objects, sites, places and/or values within the study area, and the question of whether the proposed development may impact on such objects, has been assessed and the results presented in this report.

1.2.2 Environmental Planning and Assessment Act 1979

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments are usually historic sites but can include Aboriginal objects and places. The EP&A Act requires that appropriate measures be taken for the management of the potential archaeological resource by means consistent with practices and standards adopted in meeting the requirements of the NPW Act.

The study area is located within Randwick City Council and comes under the Randwick Local Environmental Plan, 2012. One Heritage Item is identified within the study area; formerly a component of a larger 'Conservation Area' (Figure 1.2). The conservation area is annotated 'C13', which is a part of the conservation area associated with the Randwick Racecourse.

The heritage items named under the LEP are all historical items, managed under the *Heritage Act 1977* (NSW). There are no items of Aboriginal heritage (Schedule 5, Part 5 Aboriginal Heritage) listed in connection with the study area under the LEP.

Table 1.1 Heritage Listing within the Study Area.

Item Number	Item Name	Address	Significance
I122	Two-storey terraced pair	10–12 Doncaster Avenue Lot 1, DP 1033442; Lot 1, DP 981704; Lot 51, DP 2905	Local
C13	Racecourse conservation area	N/A	Local

1.2.3 Approach to Aboriginal Heritage Management

In order to administer the NPW Act and EP&A Act, the OEH has issued a series of best practice guidelines and policies. The applicability of these depends upon the approval mechanism for a project.

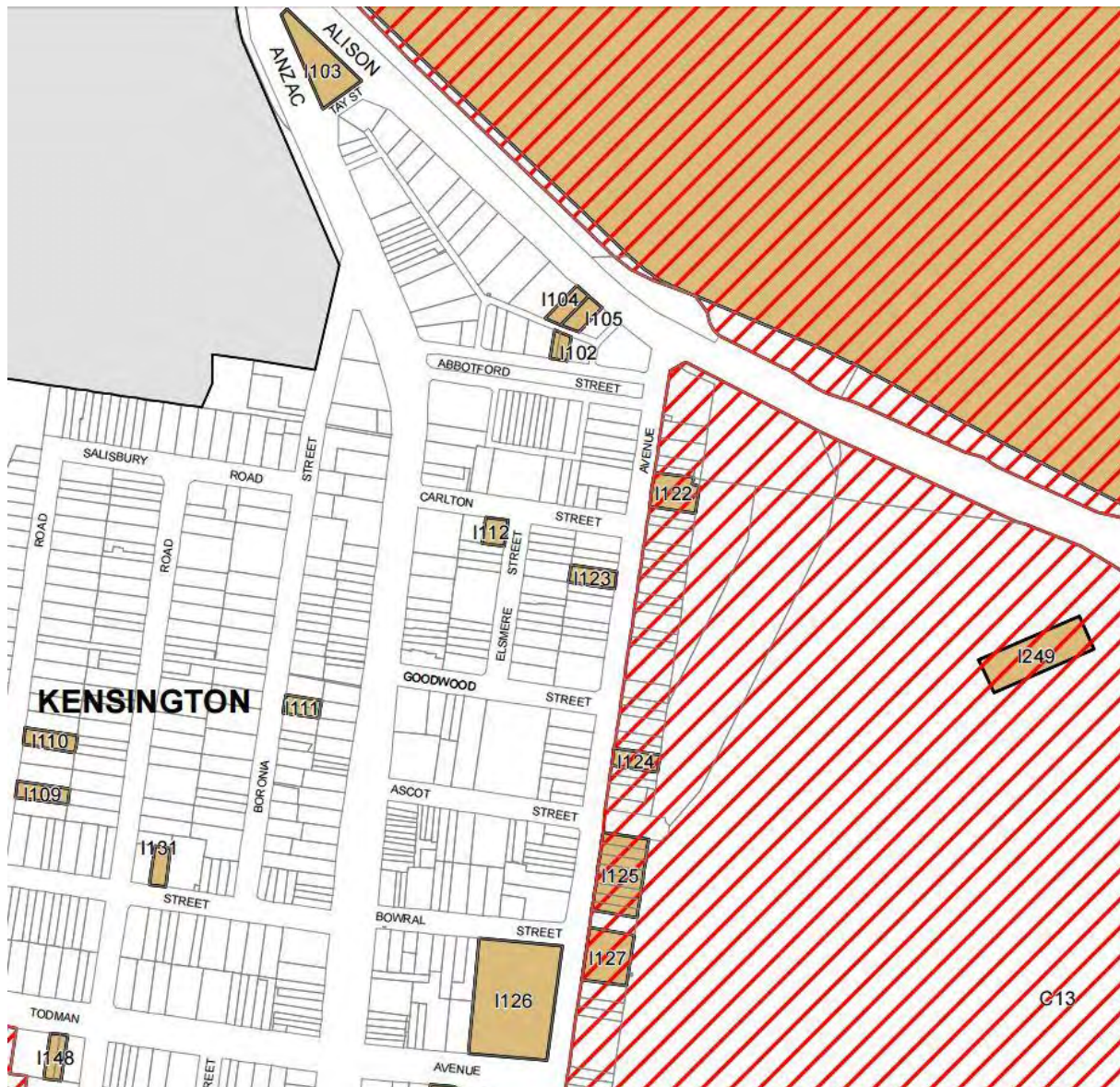


Figure 1.2 Randwick City Council LEP Heritage Map. (Source: Randwick City Council, 2012)

The current project will be assessed and granted approval under Part 4 of the EP&A Act. Therefore the approach to the preparation of this document was based on the following current best practice guidelines:

- Department of Environment and Climate Change (DECC), *Guide to Determining and Issuing Aboriginal Heritage Impact Permits* (2009);
- DECC, *Operational Policy: Protecting Aboriginal Cultural Heritage* (February 2009);
- Department of Environment, Climate Change and Water (DECCW), *Aboriginal cultural heritage consultation requirements for proponents 2010, Part 6*, National Parks and Wildlife Act 1974 (April 2010);
- DECCW, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010);

- DECCW, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010);
- OEH, *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011); and
- The *Australia ICOMOS Burra Charter, 2013* (the Burra Charter).

1.2.4 Due Diligence, Previous Assessment and Impact Statement

The OEH adheres to the Due Diligence Code which defines a ‘due diligence’ approach to Aboriginal heritage. The Due Diligence Code is designed to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects, and/or Aboriginal Places, and to determine whether they should apply for consent in the form of an AHIP.

The Due Diligence Code sets out the reasonable and practicable steps which individuals and organisations need to take in order to:

- identify whether or not Aboriginal objects are, or are likely to be, present in an area;
- determine whether or not their activities are likely to harm Aboriginal objects (if present); and
- determine whether an AHIP application is required.

In 2016, GML conducted salvage excavation at RSY1 as part of the state significant Sydney Light Rail project. RSY1 is located east and immediately adjacent to the study area. RSY1 is therefore registered in AHIMS as extending partially into the study area, immediately requiring the application of an AHIP.

Due diligence is a legal concept that describes a standard of care in considering the likely risks a proposed activity may have and any obligations that may apply. In the case of the NPW Act, the OEH has defined due diligence as

taking reasonable and practical steps to determine whether a person's actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm.²

The steps that are required to follow the due diligence process are:

- searching the Aboriginal Heritage Information Management System (AHIMS);
- checking for landscape features which may indicate the presence of Aboriginal objects;
- strategies to avoid harming Aboriginal objects; and
- desktop assessment and visual inspection to confirm the presence of Aboriginal objects.³

In preparing this report, GML complied with the guidelines set out in the Due Diligence Code. The extent of land covered by the due diligence process is described as the study area, see below.

Application to the Current Assessment

In preparing this report, GML complied with the guidelines set out in the Due Diligence Code. The extent of land covered by the due diligence process is described as the study area.

The scope of work included the following tasks:

- a review of historical and Aboriginal cultural and archaeological research within the vicinity of the study area since 2009;
- collation of any additional existing information on the ethnohistory of the study area;
- a search of the AHIMS for known Aboriginal objects and/or sites within the vicinity of the study area;
- evaluation of the previous predictive model and significance assessment for the study area based on the background research;
- examination of aerial photographs to identify any disturbances or changes to the study area since 2009;
- preparation of a report that complies with relevant OEH guidelines; and
- updating recommendations for management of Aboriginal and historical heritage within the study area in the future.

1.2.5 The Burra Charter Process

The Burra Charter process (Article 6) defines a broad three-stage process—comprising seven smaller steps—for the management of heritage. The three stages involve:

1. developing an understanding of significance;
2. ensuring policy is developed appropriate to the significance; and
3. ensuring management is undertaken in accordance with that policy.

The definitions presented in the Burra Charter have provided the basis for definitions used in this report. The Burra Charter's Indigenous Practice Note provides further guidance for application of the Burra Charter to Aboriginal heritage. Of relevance are the following definitions:

Article 1.1—Place

Place means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.⁴

'Place' includes locations that embody spiritual value (such as Dreaming places, sacred landscapes, and stone arrangements), social and historical value (such as massacre sites), as well as scientific value (such as archaeological sites). In fact, one place may be all of these things or may embody all of these values at the same time.⁵

Article 1.2—Cultural Significance

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.⁶

Article 1.10—Use

Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.⁷

Article 1.11—Compatible Use

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Article 8—Setting

Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place.⁸

Places of significance to Indigenous people require a holistic approach to 'setting'. 'Setting' may encompass the broadest of experiential factors including a sense of 'intrusion' occasioned when people of the 'wrong' gender, age or level of initiation trespass on defined areas, as well as auditory and visual intrusion.

For some Indigenous peoples, nature and culture are indivisible. The social significance and spiritual significance of a place for Indigenous people may be wholly or partly dependent on the natural environment that the place forms a part of, including aspects such as biodiversity, and totemic and resource species.⁹

Application to the Current Assessment

Stages 1 and 2 of the Burra Charter Process have been applied during the current project. The following steps have thus been undertaken:

Step 1—Understand the place

This involved desk-based investigation into the environment, archaeology, history and literature relevant to the study area. Field survey was undertaken in collaboration with the Aboriginal community (in 2009). The outcome of the Step 1 investigations was the development of archaeological and landscape zoning plans, which show the known sites, places and values connected to the study area. The approach followed the notion that the study area is part of an Aboriginal cultural landscape, and the study area represents a small zone within this landscape.

Step 2—Assess cultural significance

A preliminary indication of cultural significance considered aesthetic, historic, scientific and social aspects to the study area. This preliminary assessment of value should be used for future assessments, noting both that 'cultural significance may change'¹⁰ and 'tangible heritage should not be emphasised at the expense of intangible heritage'.¹¹

Step 3—Identify factors and issues

The results from Steps 1 and 2 were used to identify obligations arising as key future management factors and/or issues. The issues and factors define future needs, opportunities and constraints connected with possible future compatible use.

Step 4—Develop policy

The outcome from Step 3 was applied to develop appropriate management policy, in consultation with the Aboriginal community and in accordance with relevant NSW statutory processes.

1.2.6 Reporting Approach

This ACHAR has been prepared in accordance with the requirements of OEH, *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011).

1.3 Objectives of this Aboriginal Cultural Heritage Assessment

The objectives of this assessment were to:

- undertake identification of Aboriginal community members who can speak for the Country within which the project is located;
- involve the Aboriginal community in the cultural heritage assessment process;
- consult with the Aboriginal community and determine their opinions with respect to the project and its potential 'harm' to their cultural heritage;
- understand the range and type of Aboriginal heritage values and places within the study area;
- determine whether the identified Aboriginal sites and places are a component of a wider Aboriginal cultural landscape;
- understand how the physical Aboriginal sites relates to Aboriginal tradition within the wider area;
- prepare a cultural heritage values assessment for all identified aspects of Aboriginal cultural heritage, as identified within this report;
- determine how the proposed project may impact the identified Aboriginal cultural heritage;
- aim to minimise impacts to Aboriginal cultural heritage through sensible and pragmatic site and land management;
- determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit Aboriginal cultural heritage and the proponent; and
- provide clear recommendations for the conservation of Aboriginal heritage values and mitigation of any potential impacts to these values.

1.4 Exclusions

The conclusions of this report are based on a review of recent publically available background information. No surface survey or excavation was undertaken as part of this work.

1.5 Investigators, Contributors and Authorship

This project has undertaken by the personnel listed in Table 1.1. Each person's role, qualification and affiliations are detailed in the table below.

Table 1.1 Investigators and Contributors

Person (Qualification)	Affiliation	Role
Dr Tim Owen (PhD, BA Hons)	GML	Project director, author and reviewer
Sam Player (BSc Hons and BA)	GML	Project manager, primary author
Jane McMahon (BA Hons)	GML	Senior Consultant, author

Person (Qualification)	Affiliation	Role
Jodi Cameron (BA Hons)	GML	Consultant, author

1.6 Endnotes

- ¹ DECCW, *NPWS Act 1974*, 'Fact sheet 1', September 2010.
- ² Department of Climate Change and Water (DECCW), 13 September 2010. Due Diligence Code of Practice for the Protection of Aboriginal objects in NSW, DECCW, Sydney, p 18.
- ³ DECCW, *NPWS Act 1974*, 'Fact sheet 2', September 2010.
- ⁴ Australia ICOMOS Inc, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, Article 1.1.
- ⁵ Australia ICOMOS Inc, *Burra Charter Practice Note 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, p 2.
- ⁶ Australia ICOMOS Inc, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, Article 1.2.
- ⁷ Australia ICOMOS Inc, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, Article 1.10.
- ⁸ Australia ICOMOS Inc, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, Article 8.
- ⁹ Australia ICOMOS Inc, *Burra Charter Practice Note 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, p 5.
- ¹⁰ Australia ICOMOS Inc, *Burra Charter Practice Note 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, p 4.
- ¹¹ Australia ICOMOS Inc, *Burra Charter Practice Note 2013*, Australia ICOMOS Inc, Burwood, VIC, 2013, pp 2 and 4.

2.0 Description of the Project Area

The precise location and cadastral boundaries of the study area were presented in Section 1. This section provides further details of the study area including the precise boundaries, the occurrence of Aboriginal objects and/or places proximal to it, its local and wider environmental setting, and its ethnohistorical background.

2.1 The Study Area Boundaries

The study area is located within the Randwick local government area in the parish of Alexandria at 4–18 Doncaster Avenue, Kensington. The boundaries of the study area are indicated in Figure 2.1 and are inclusive of the following lots:

- Lots 2 and 3 DP 5549;
- Lot 1 DP 1094702;
- Lot 1 DP 981704;
- Lot 1 DP 974821;
- Lot 1 DP 1033442;
- Lot 51 and 53 DP 2905; and
- Lot 52A and 52B DP 400051.

2.2 Aboriginal Objects and/or Places

An assessment of known Aboriginal objects and places within and around the boundaries of the study area was undertaken. Sites registered in the Aboriginal Heritage Information Management System (AHIMS) within 3km of the study area were reviewed (Table 2.1 and Figure 2.2). A 3km limit was regarded as environmentally representative given that it takes in the approximate boundaries of the Botany Sands to the west, north, and east. The sites occurring within the 3km buffer include seven open sites with one midden and one rock engraving, and one closed site rock shelter with art. A literature review of Aboriginal heritage investigations that have occurred in the area was also conducted.

Aboriginal sites RSY 1 and the Doncaster Ave PAD are associated with the study area and were registered on AHIMS as a consequence of this assessment and recent work on the adjacent site by GML. These sites are further described in Sections 2.2.8 and 2.2.9.

Table 2.1 Aboriginal Sites Occurring Within 3km of the Study Area.

Site ID	Site name	Context	Site types
45-6-0647	Centennial Park	Open site	Rock Engraving
45-6-0675	Randwick Queen's Park Waverley	Closed site	Shelter with Art
45-6-2495	Prince of Wales Hospital Aboriginal Hearth;	Open site	Open Camp Site
45-6-2597	Wynyard St Midden	Open site	Midden
45-6-2896	Queens Park PADs	Open site	Potential Archaeological Deposit

Site ID	Site name	Context	Site types
45-6-2897	Queens Park PAD (duplicate see 45-6-2896)	Closed site	Potential Archaeological Deposit
45-6-3155	Moore Park AS1	Open site	Stone artefact site
45-6-3245	Doncaster Ave PAD	Open site	Potential Archaeological Deposit
45-6-3246	RSY 1	Open site	Stone artefact site

2.2.1 Early Aboriginal Archaeological Investigations

Archaeological investigations into the Aboriginal history in southeastern Sydney have been undertaken for over 100 years. While often not investigated as scientifically as modern archaeological excavations, early records of their findings reveal important evidence of Aboriginal occupation of the area. A small silcrete flake collected in 1902 from the Sydney Cricket Ground is kept at the Australian Museum.¹

The construction of the Alexandra Canal in the 1890s yielded some interesting evidence of Aboriginal occupation in the Botany Basin. The excavation for the canal resulted in a 5 metre sediment section being exposed, which provided important evidence of the geomorphological and environmental changes in the local area. The stratigraphy and archaeological features were recorded in detail by Robert Etheridge of the Australian Museum at the time of discovery.² Three Aboriginal hatchets were discovered close to the Rickety Street Bridge. Dugong bones, with evidence of Aboriginal butchering on them, were also discovered nearby in an estuarine deposit with abundant shell material. The dugong bones were recently radiocarbon dated to 5520 ± 70 BP, and Etheridge's report records that Aboriginal artefacts were present above and below the bones. Tree stumps from a burnt and buried eucalypt forest were preserved in the lowest observed layer, and are evidence of an early terrestrial layer. The presence of the dugong remains indicate that the Sydney region experienced warmer waters for a period during the Holocene, and provides further evidence about fluctuating sea levels.³

An engraved rock art site was recorded on Darvall Street in 1899. The site included figures such as two boomerangs, part of a kangaroo or wallaby, and a 'stone tomahawk'. In the late nineteenth century the site was noted as being worn by cart traffic over the engraving.⁴ It was destroyed in the twentieth century by road works.

2.2.2 The Botany Wetlands

David Crew prepared an assessment of Aboriginal archaeology within the Botany Wetlands in 1991. The report concluded that the Botany Wetlands area, which is within the Lachlan Swamps system that extends across the CSELR study area to Centennial Park, would have been:

...an important fresh-water [sic] resource area in close proximity to the sheltered Botany Bay estuary. The water areas are flanked by sand dunes that rise over 25m above sea level which would have provided suitable occupation areas.⁵

Crew reports that Aboriginal skeletal remains were identified within the Botany Wetlands (at Eastlakes Golf Course) in 1982. The report identifies that Aboriginal archaeological evidence—particularly previous occupation sites and burials—have the potential to survive in less disturbed dunes where large amounts of sand have not been removed in the historical period and are stabilised by vegetation.



Figure 2.2 Aboriginal archaeological sites listed in the AHIMS and within 3km of the study area. (Source: SIX Maps and AHIMS, with GML overlays)

2.2.3 The Prince of Wales Hospital

The Destitute Children's Asylum Cemetery (45-6-2495)

Aboriginal archaeological evidence was identified during historical archaeological excavation at the Prince of Wales Hospital (PoW) 1995.⁶ Three hearths were identified during works. These were characterised by clusters of burnt sandstone manuports (stone moved by human activity) arranged in a roughly circular shape. One of the hearths (Feature 203), dated using Carbon 14 dating and thermoluminescence, returned dates of 7860 ± 50 BP and 8400 ± 800 BP respectively. Residue analysis on a hearth stone, also from Feature 203, suggests that an aquatic animal—probably a freshwater fish as indicated by high amounts of a particular fatty acid—was cooked at this hearth.

A number of sandstone manuports not clearly associated with a defined hearth were also identified. These sandstone pieces are considered manuports and thus associated with the Aboriginal occupation of the area based on the 'assumption that pieces of stone in an aeolian sand dune can have no method of transport other than human'.⁷

A small number (10) of flaked stone artefacts were also identified at the PoW site. All were of a white, banded indurated stone of unknown source. The excavation report notes the absence of silcrete as unusual.

Godden Mackay and Austral suggest that, given the very small amount of flaked stone at the PoW study area, the evidence represented a sporadic occupation of the dune margins where exploitation of the local resources occurred, particularly within the swamp or wetland areas.

A Conservation Management Plan

A Conservation Management Plan (CMP) was undertaken to guide future development at the POW study area. This included built heritage and archaeological management policies and principles.

The study predicted that open occupation site types and burial sites may occur in relatively undisturbed areas around Botany Bay and along the coast, as well as along the swamps of the Botany dune system. The assessment identified, in the absence of peaty stratigraphic layers, that it is unlikely to have been a focus area for Aboriginal occupation. Predicted remains include abandoned durable material cultural items or sporadic or single use campsites moving between resource zones. More substantial material was predicted to occur in areas closer to the resource rich swamp land.

The methods involved included a site inspection with LPALC, a historical aerial review and modern disturbance analysis to identify areas of potential for Aboriginal archaeological remains. The northern portion of the site (in the Clinical Core and Heritage Precincts—including the Children's Hospital (No. 1A) and other buildings on High Street) was found to have little substantial subsurface deposits with shallow dune, with the foundation of the Edmund Blacket Building and the Royal Women's Hospital excavated up to 20m to bedrock. A sandstone quarry in the Opportunity Precinct was also identified as an area where Aboriginal material would not occur.

Two main areas of Aboriginal archaeological sensitivity were identified in the CMP. Beyond the disturbance of different phases, the methodology for identifying these two areas of potential was not captured within the CMP.

The Destitute Children's Asylum Cottages

An investigation of the Destitute Children's Asylum Cottages was undertaken by Cultural Resources Management in 2011. Excavations were conducted for mitigation of a Neuroscience Research Precinct, located at the intersection of Barker and Easy Streets. In total, ten mechanical pits and four hand excavated pits were sampled, including beneath the historical archaeology. The sand dune profile was found to continue beneath the historical archaeology, however, no Aboriginal sites were identified. The soil profile indicated that the landform constituted a long gentle slope running from east to west. This was interpreted as the reason Aboriginal remains were not present, reflecting the dispersed and limited use of the lower dune by Aboriginal people.

The Comprehensive Cancer and Blood Disorder Clinic

Aboriginal archaeological test excavations were undertaken by Mary Dallas Consulting Archaeologists (MDCA) for the construction of a Comprehensive Cancer and Blood Disorder Clinic. The investigations involved a combined program of historical archaeological and Aboriginal archaeological test excavations to determine whether Aboriginal or European heritage remains were present in areas proposed for the construction of the clinic.

An area of low Aboriginal archaeological sensitivity was identified by a previous assessment and subjected to archaeological test excavation. A total of eight mechanical trenches and four manual pits were excavated during the investigations. Recent historical fill of variable type and depth were exposed across the site. This included previous asphalt surfaces, pipe trenches, introduced materials in mixed sands and other rubble. No evidence of an intact upper (A1) original soil profile was located. Instead, in most trenches a truncated A2 Horizon consisting of white/grey sands generally 10cm–25cm in thickness was found overlying a very friable white sandstone bedrock.

One trench (6b) contained a deeper dune profile due to its position downslope from many of the other trenches. This trench exhibited a profile typical in this area with an A2 white sand horizon overlying an indurated 'coffee rock' layer on yellow sand, on bedrock. This yellow sand (B Horizon) has been shown elsewhere to predate human occupation of the area. The A2 sands were sampled and no archaeological material was located.

2.2.4 The Eastern Distributor

Godden Mackay (in association with Brayshaw Heritage Consultants) undertook archaeological monitoring of trial construction pits prior to the construction of the Eastern Distributor along the western edge of Moore Park in 1997.⁸ Some of the test pits were located in areas close to the Moore Park precinct. The investigations yielded no evidence of Aboriginal occupation, and indicated that this section of Moore Park had been generally highly disturbed. Test pits indicated that between 0.4 and 1.5 metres of introduced fill was spread across the western edge of Moore Park. All test pits were excavated only to a maximum depth of 2.2 metres. The pH of natural soils encountered stood close to neutral, which increases the possibility that organic materials could be preserved.

The report also detailed the results of geotechnical investigations undertaken in the vicinity of the Moore Park precinct for the construction of the Eastern Distributor. Fill was indicated to extend in some parts along Moore Park's western end between 1 and 4.7 metres deep. Dune sands were found to be 15 to 20 metres thick south of the Moore Park precinct (south of Charles Street, Redfern). Freshwater swamp peat and lake deposits are particularly noted in the A horizon soil which is 1–3 metres thick. The A horizon is 13 to 17 metres below the current ground level close to Charles Street, rising to 5 metres below the current ground level close to Maddison Street.

2.2.5 Centennial, Moore and Queens Parks

Australian Museum Business Services (AMBS) prepared an assessment of historical and archaeological evidence for Aboriginal land and resource use in Centennial, Moore and Queens Parks to inform the preparation of the Centennial Parklands Conservation Management Plan in 2002.⁹

A number of previously identified Aboriginal sites within the parklands were discussed, including (now destroyed) rock engravings at Darvall Street, and a rock shelter in Queens Park with 27 white human hand stencils. One artefact is held in the Australian Museum collection from the Sydney Cricket Ground. No new sites were identified during the course of the project.

AMBS suggest it is possible that Aboriginal archaeological evidence survives at depth beneath areas that are presently ponds, landfill, buildings and other structures. Areas of sandstone outcropping at elevation are prone to periodic exposure/covering. Currently covered outcrops may have been engraved in the past during periods of exposure.¹⁰ Moore Park Tennis Centre (45-6-3155)

A program of archaeological test excavation was carried out in the Moore Park Tennis Centre carpark area in September 2014 on site Moore Park AS1. Five pits were machine excavated to a depth of 1.2 metres. Aboriginal objects were retrieved from a distinct darker grey sand profile—from a depth of 0.9 to 1 metre in Test Pit 4. The darker grey sand overlaid a much lighter bleached sand profile. It was concluded that the Aboriginal objects were retrieved from an intact A1 sand profile overlying a sterile A2 sand profile. Salvage excavation was carried out, but the post-excavation report is not currently available.

2.2.6 Randwick Racecourse

Dominic Steele Consulting Archaeology prepared an assessment of Aboriginal heritage values of Randwick Racecourse to inform a conservation management plan for the site.¹¹ The site has undergone widespread environmental and landscape modification. However, a high sand dune rises over 20 metres above the rest of the racecourse in the southeast corner of the site (corner of Wansey Road and High Street). Given the high levels of disturbance experienced across most of the racecourse, it was assessed that it would be unlikely that surface or immediately subsurface Aboriginal archaeological evidence would be present across most of Randwick Racecourse. Archaeological evidence may survive in deeper sand dune contexts, which may be several thousands of years old. The remnant dune in the southeast corner was identified as having high Aboriginal archaeological sensitivity.

2.2.7 Aboriginal Burials in the Sydney Basin

The nature and distribution of Aboriginal burials across the coast and coastal hinterland was identified and discussed by Donlon in 1995. Using information on burials from museums, the National Parks and Wildlife Service and the Glebe Morgue, general trends were identified. It was found that sand bodies, including beach sand, dunes and estuarine sands, have a high potential for containing burials—with a large percentage of remains found on the foreshores of bays and harbours.¹² The recorded graves supported historical information which suggests that graves were generally between 0.5 and 2 metres below the surface.¹³

2.2.8 RSY 1

RSY 1 (45-6-3246) was located immediately adjacent to the southeast edge of the study area and extends into it (mapping of the site extent in AHIMS describes the extent of RSY 1 within the current study area). Aboriginal archaeological excavations in the development area in and around RSY 1 were undertaken as part of the development for the Sydney Light Rail Project. Initial test excavations found that the southern half of the development area was highly disturbed; being composed of deeply stratified deposits derived from locally derived fill materials, but which had been historically displaced. However, the northern half of the development area, beneath a unit of historical fill, was found to be composed of in-tact sand dune profiles with a partially truncated surface horizon, characteristically dark as a result of the presence of decomposed organic materials. RSY 1 was identified within the truncated but in-tact dune surface horizon.

The sand substrate at RSY 1 was found to be very fragile and prone to collapse. Standard manual archaeological methods could not be used at the substantial depths because of safety concerns, RSY 1 having a substantial depth of stratified deposit exceeding 4m in places. Staged excavations were found to be problematic for maintaining the integrity of the unexcavated portion of the site and the exposed excavation was susceptible to harm between stages. The best management solutions implemented to protect the integrity of the exposed excavation between stages were still found to be somewhat disruptive to the sands. The fragility of the substrate would therefore have benefitted from a single-stage excavation approach.

From the field investigations and reference to the available geological literature, a geomorphological model was developed for the RSY 1 site. Aeolian sands had accreted through the Pleistocene and into the Holocene forming longitudinal dunes with local topographic peaks and troughs. After cessation of aeolian accretion sometime in the Holocene, Aboriginal objects became concentrated at the surface of the dune landform. During subsequent development of the area by British colonists the dune

topography was levelled by displacement of dune peaks into the troughs. Some pre-European ground-surfaces would therefore have been preserved by this procedure including some lower dune peaks.

At RSY 1, Aboriginal objects were identified in a sandy topsoil that represented the ground-surface after cessation of aeolian accretion and prior to topographic modification by European activity. Because the soil profile of the in-tact dune was so characteristic, borehole survey was able to trace the profile across the north of the site. The newly identified locations of in-tact dune profile were recognised as viable archaeological targets for further archaeological test excavation (which involved mechanical removal of fill, followed by 1m² test pits to sample the upper dune layers).

No Aboriginal objects were found during the subsequent testing, although a swamp deposit was identified during borehole survey at the northern extent of the survey and was subsequently sampled for palaeoenvironmental evidence. The program of geomorphological and archaeological work accurately described the extent and nature of the site RSY 1, which is clearly shown on the RSY 1 AHIMS card.

Given the connected nature of the sand dunes and the proximity between the RSY and Doncaster Avenue sites (abutting), the methodology developed and applied to the investigation of the intact dune profiles surrounding RSY 1 have been applied to the Doncaster Avenue PAD.

2.2.9 Doncaster Ave PAD

The Doncaster Ave PAD was registered to encompass the study area, beyond the boundary of site RSY 1. The upper surface and subsurface units of the Doncaster Ave PAD are developed and composed of a layer of historical fill, with a depth 0.2m to ~1m. Therefore, no Aboriginal objects are visible at the surface level.

Below the layers of historical fill, it was deduced that the intact subsurface dune stratigraphy should be largely equivalent to that at in and around RSY 1. The area with PAD is therefore depth dependent and could potentially contain Aboriginal objects in an undisturbed context, beneath the surface unit of historical fill. Similar to RSY 1, some of the overlying lower units of fill could contain displaced Aboriginal objects.

The boundary of RSY 1 has been characterised through extensive geomorphological and archaeological work, and extrapolated into the Doncaster study area. RSY 1 is characterised as a discrete deposit, which does not spread across the wider landscape. As such, any further Aboriginal objects, identified within the Doncaster PAD, are likely to be representative of separate deposition events to that which resulted in the formation of RSY 1.

2.3 Environmental Setting

2.3.1 Geology and Geomorphology

The study area is situated within the Botany Basin which was a prior river valley formed from the flow of the contemporary Georges River.¹⁴ The basement of the basin is composed of Ashfield Shale (Rwa), which outcrops to the west and northwest of the study area, and Hawkesbury Sandstone (Rh), outcropping to the east and northeast (Figure 2.3 and Table 2.2). The Botany Basin is filled with a thick sequence of sediments and so the basement rock is unlikely to form any part of an archaeological context that might occur within the study area. The sediments are formally defined as the Botany Sands and are composed of medium to fine-grained sand of marine origin and Quaternary age (Qhd) (Figure 2.3 and Table 2.2).¹⁵

Table 2.2 Units Codes and Lithological Description of Substrate under and around the Study Area.16

Unit	Lithology
Jv	Volcanic breccia, varying amounts of sedimentary breccia, and basalt.
mf/Qha	Man-made fill (dredged estuarine sand and mud, demolition rubble, industrial and household waste) overlying silty to peaty quartz sand, silt and clay with ferruginous and humic cementation in places and common shell layers.
Qd	Medium to fine-grained marine sand with podzols.
Qha	Silty to peaty quartz sand, silt, and clay. Ferruginous and humic cementation in places. Common shell layers.
Qhb	Coarse quartz sand, varying amounts of shell fragment.
Qhd	Medium to fine-grained marine sand with podzols.
Qhf	Medium to fine 'marine' sand.
Qhs	Peat, sandy peat, and mud.
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses.
Rwa	Black to dark grey shale and laminate.

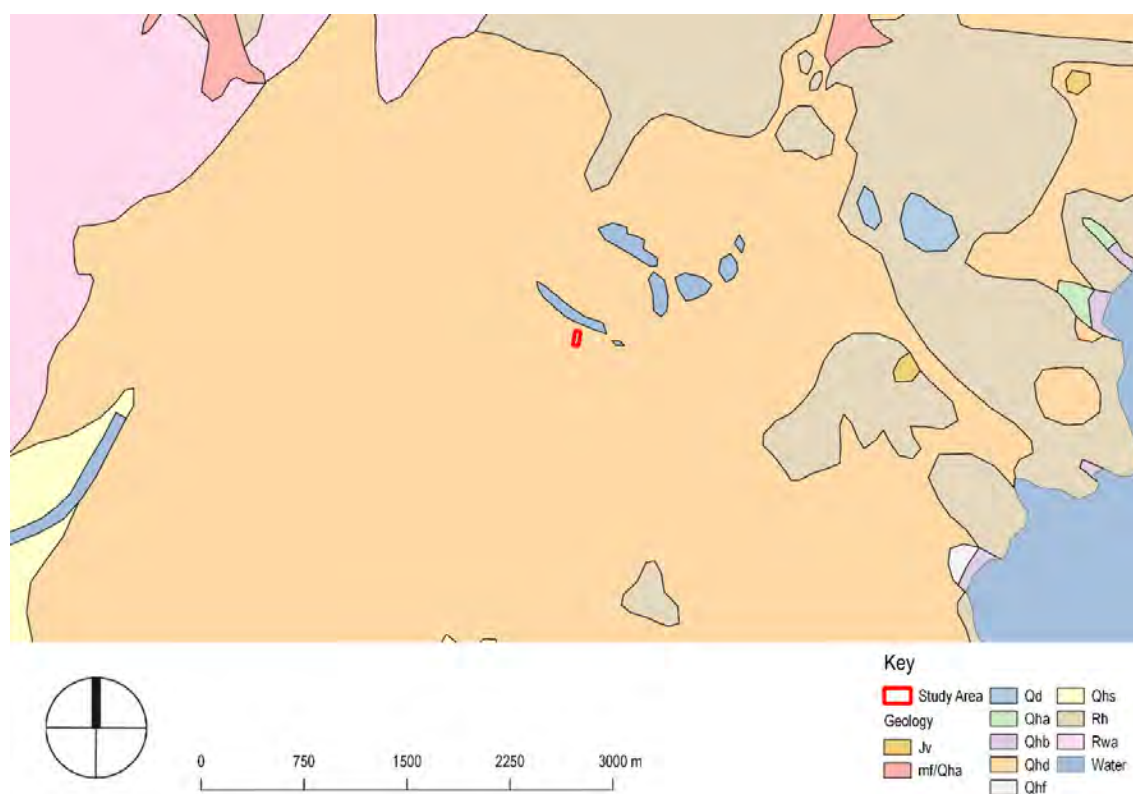


Figure 2.3 Geology of the area below and around the study area. (Source: Geological Survey of NSW with GML overlay)

The sequence of sediments composing the Botany Sands reaches thicknesses of up to 80m. The lower units are composed primarily of fluvial sands and gravels overlain by silts and plant organic-rich muds suggesting deposition under within-channel fluvial environments, followed by estuarine habitats. Overlying the lower units are up to 30m of well-sorted aeolian sands with discontinuous interbeds of plant organic-rich muds in the upper profile. The upper unit is composed of less than 10m of largely aeolian sands but also estuarine sands, beach ridges and terrestrial swamps.¹⁷

The lower units of the Botany Sands represent environments that are unlikely to be frequented habitually by past human groups whereas the upper units not only represent habitable environments, but are also depositional and likely to preserve cultural materials stratigraphically. It is also known that the upper aeolian materials were deposited within the timeframe of the human occupation of Sydney.¹⁸ Radiocarbon analysis of a single sample from the plant organic-rich interbeds of the 30m unit (within the upper portion) exceeded 35,000BP¹⁹ and the terrestrial swamps of the upper 10m unit have yielded radiocarbon dates of 8880±200BP²⁰ and 5450±40BP.²¹

The upper aeolian units of the Botany Sands are all viable contexts for the preservation of archaeological materials and may occur to depths of at least 10m. From geotechnical investigations by Douglass Partners in 2015²² it is known that the immediate study area is composed of up to 1m to 2m of historical surface fill at the south of the site; sand and silty sand (Unified Soil Classification nomenclature) extend to depths of at least 15m depth over the entire site. It can be inferred from the above that at least 10m of the upper profile should be regarded as a viable archaeological context.

The study area is located physiographically within the Cumberland Lowland region of the Macquarie Uplands Province²³ which is characterised by undulating to low hilly country. The local subcatchment has a centripetal drainage pattern southwest towards Botany Bay, bounded to the north and east by ridges associated with Hawkesbury Sandstone (Rh) and exceeding 75m (AHD) (Figure 2.4). Elongate topographic highs bearing in the same direction as the local streetscape also occur to the west of the study area. These are unlikely to be outcrops of the Hawkesbury Sandstone for the reasons outlined above but instead may be local remnants of north–south bearing longitudinal dunes that are known to have existed at the surface of the Botany Sands prior to European activity.²⁴

The landscape around the study area is otherwise heavily urbanised and there are few opportunities to examine the pre-European micro-topography, even where clearings exist such as at Centennial Park, because of substantial displacements of the surface materials since European colonisation.

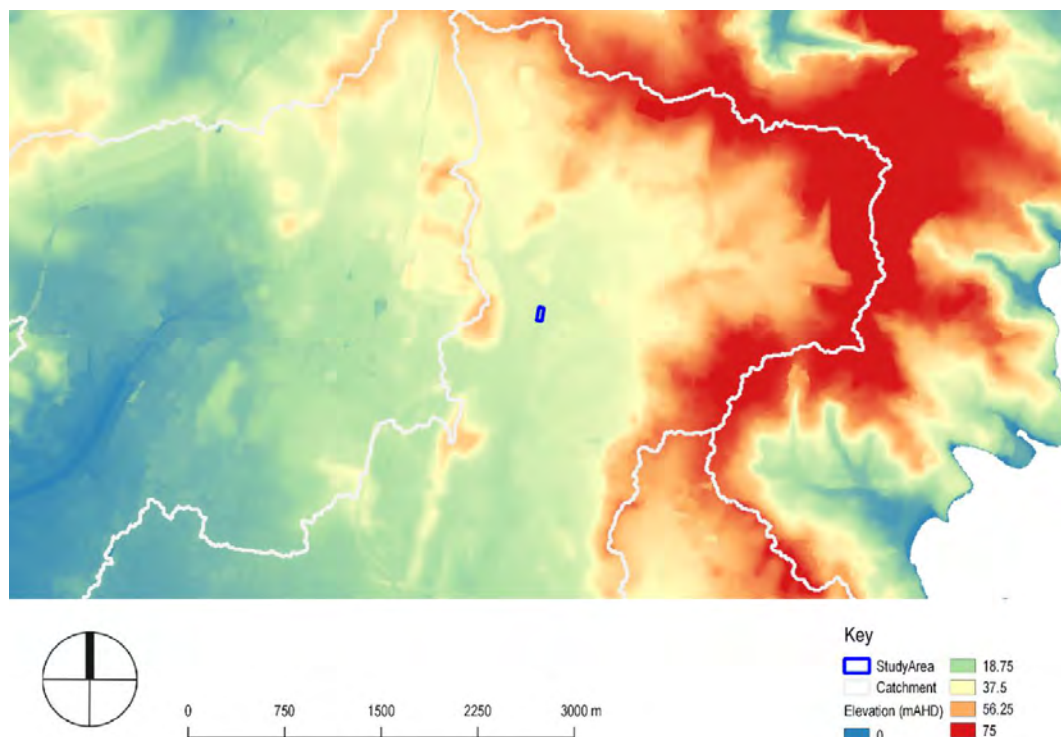


Figure 2.4 Topography surrounding the study area. (Source: Geoscience Australia; GML overlay)

2.3.2 Soils

The study area is situated on the Tuggerah soil landscape (Figure 2.5), which largely conforms spatially to the boundary of the Botany Sands (Figure 2.3). Alternative geological parent materials have been inferred to not occur at the site (Section 2.3.1) and are therefore not considered here. The Tuggerah soil landscape was formed on aeolian dunes with deep (>200cm) Podzols occurring on dune slopes and crests and Podzols/Humus Podzol intergrades on swales. Details of the physical characteristics of the dominant soil materials are presented in Table 2.3 and might be used to interpret the original topographic configuration where found in an undisturbed substrate.

Podzols (podosols in the Australian Soil Classification²⁵) are commonly developed on sandy coastal areas of NSW. They formally consist of soils that:

possess either a Bs horizon (visible dominance of iron compounds), a Bhs horizon (organic-aluminium and iron compounds), or a Bh horizon (organic-aluminium compounds). These horizons may occur singly in a profile or in combination.²⁶

An example podosol is shown in Figure 2.5, which consists of a dark grey humic topsoil (A₁ horizon), a pale grey eluvial horizon (A₂ horizon), and a strong brown subsoil which may include variably cemented coffee rock.²⁷ Divergence from this ideal may be indicative of profile disturbance. For example, absence of the A₁ and A₂ horizons would indicate either truncation of a profile or deposition of very young sediments that have not had sufficient time for horizon formation. Both cases are essential evidence for interpretation of coastal archaeological contexts in NSW.

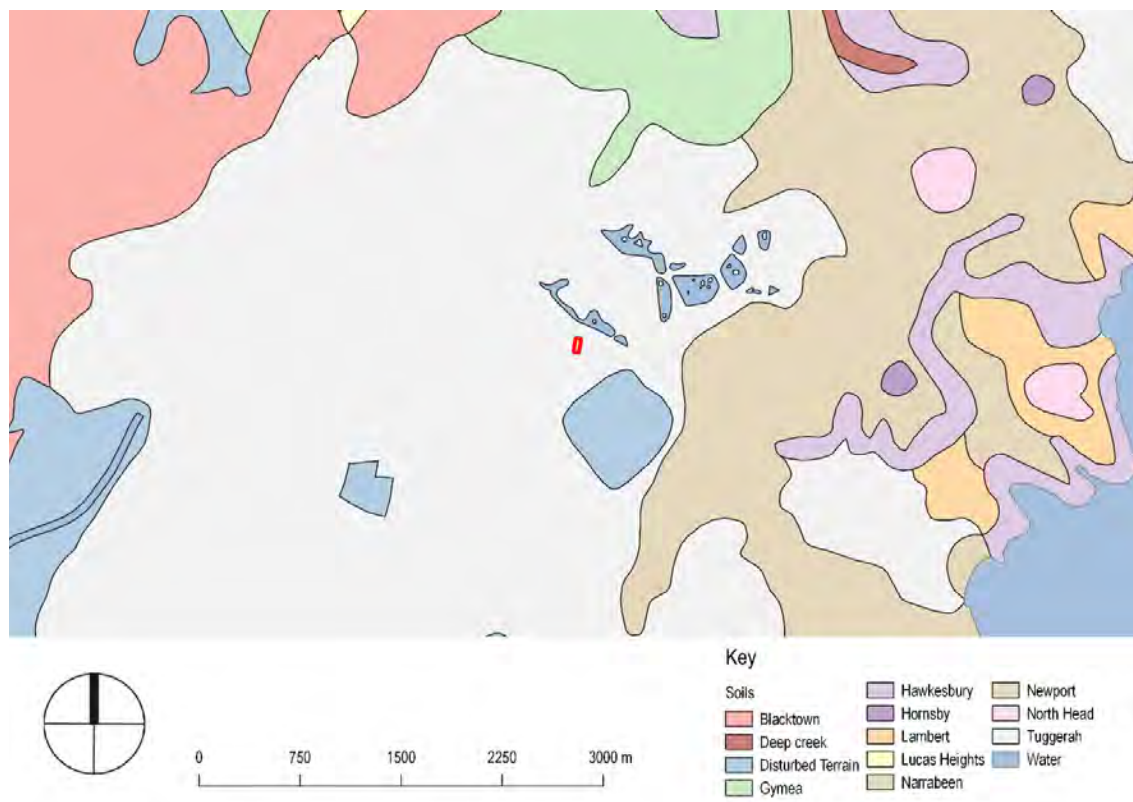


Figure 2.5 Soil landscapes occurring below and around the study area. (Source: Office of Environment and Heritage, NSW, with GML overlay).

Table 2.3 Dominant Soil Materials Composing the Tuggerah Soil Landscape.²⁸

Unit Code	Texture and Colour	Description
tg1	Loose speckled grey-brown loamy sand	Grey-brown speckled sand to loamy sand with apedal single-grained structure and porous sandy fabric. It generally occurs as topsoil (A₁ horizon). This material ranges from brownish-grey (10YR 4/1) to brownish-black (10YR 2/3) or black (10YR 2/1) with increasing organic matter. It is characteristically water repellent. The pH is slightly acid (pH 6.0) to neutral (pH 7.0). Roots are abundant and charcoal fragments are often present. Stones are absent.
tg2	Bleached loose sand	Bleached sand with apedal single-grained structure and porous sandy fabric. It occurs as an A₂ horizon. The surface condition is loose and the material is non-cohesive when dry and weakly coherent when moist. Dry colours are commonly bleached and moist colour ranges from light grey (7.5YR 8/1) and greyish-yellow (2.5Y 7/2) to dull yellow-orange (10YR 7/4). The pH ranges from moderately acid (pH 5.5) to neutral (pH 7.0). Charcoal and stones are absent and roots are rare.
tg3	Grey-brown mottled sand	Mottled sand or loamy sand with apedal single-grained structure and loose sandy fabric. It occurs as subsoil in areas of poor drainage. It is weakly coherent when moist and non-cohesive when either dry or saturated. Colours range from brownish-grey (10YR 6/1) to greyish-brown (7.5YR 4/2). Faint grey mottles become increasingly common with depth. This material is seasonally waterlogged. The pH ranges from moderately acid (pH 5.5) to neutral (pH 7.0). Charcoal and stones are absent and roots are rare.
tg4	Black soft sandy organic pan	Black, soft, organic stained sand to loamy sand with apedal massive structure and sandy or, less commonly, earthy fabric. It often occurs as subsoil pan (B horizon) associated with tg5. This material consists of quartz sand grains coated and weakly cemented with black organic compounds. Colour is commonly black (10YR 1.7/1) or brownish-black (10YR 3/1). The pH ranges from moderately acid (pH 5.5) to neutral (pH 7.0). This material requires up to a moderate force to disrupt and is often hardsetting on exposure. Stone, charcoal and roots are absent.
tg5	Brown soft sandy iron pan	This is brown soft iron stained sand to loamy sand with apedal massive structure and sandy or, less commonly, earthy fabric. It generally occurs as subsoil (B horizon) and is commonly known as coffee rock. This material consists of quartz sand grains coated and weakly cemented with yellow and red sesquioxides. Colour varies from bright yellowish-brown (10YR 7/6) to brown (10YR 4/6). Dark brown and orange mottles are common. This material requires a moderate force to disrupt and is often hardsetting on exposure. The pH ranges from moderately acid (pH 5.5) to neutral (pH 7.0). Roots are rare, and stones and charcoal are absent.
tg6	Yellow massive sand	This is yellow–orange sand to clayey sand with apedal single-grained or apedal massive structure and sandy or earthy fabric. It usually occurs as deep subsoil (B horizon). This material consists of clay-coated quartz sand grains that are compacted, but not cemented. Colour varies from light yellow (2.5Y 7/4) to dull yellow-orange (10YR 7/3). The pH ranges from strongly acid (pH 4.5) to neutral (pH 7.0). Stones, charcoal and roots are absent.

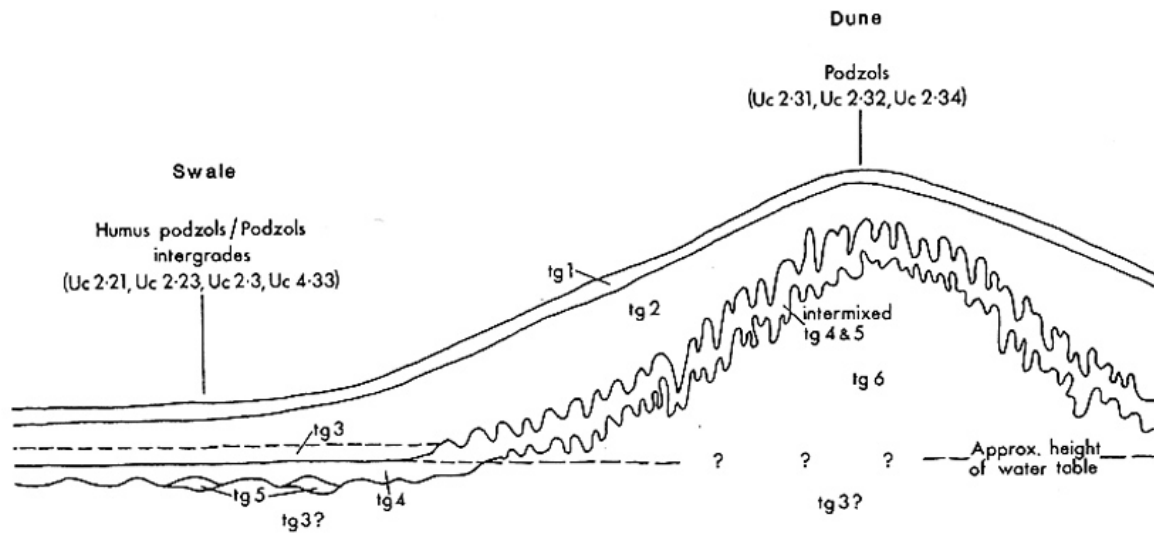


Figure 2.6 Schematic cross-section of Tuggerah soil landscape illustrating the occurrence and relationship of the dominant soil materials.¹ (Source: Chapman, GA, and Murphy, CL 1989, 'Soil Landscapes of the Sydney 1:100,000 Sheet report')

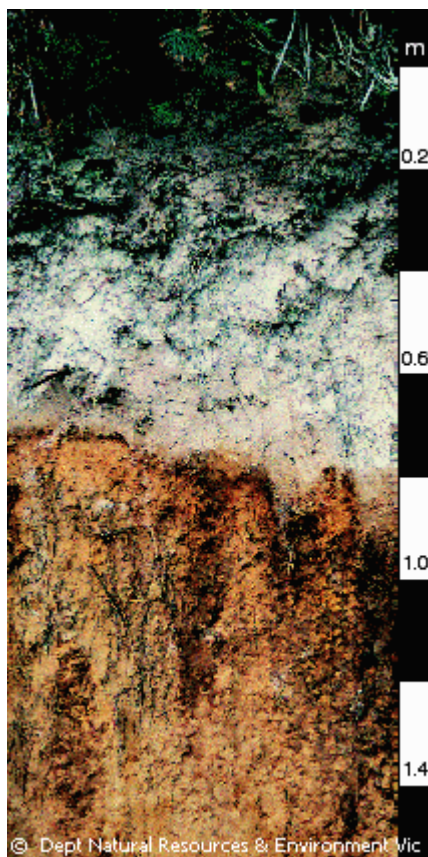


Figure 2.7 Parapanic, Humosquesic, Semiaquic Podosol from Bald Hills area, South Gippsland, Victoria. (Source: Department of Natural Resources and Environment, Victoria)

2.3.3 Hydrology

The high permeability of the sandy substrate of the study area has caused a low drainage density. It can therefore be inferred that the frequency of surface stream channels prior to European settlement would also have been low.²⁹ Contemporary stream channels are also few and include Sheas Creek (the Alexandria Canal) and Botany Swamps (Bridge Mill Pond and Bird's Gully) (Figure 2.6). The sandy substrate acts as an extensive aquifer and water is predominantly expressed at the surface where the groundwater intersects it, usually in the swales of the original dunes. Consequently, surface hydrology was largely composed of swamps which persist today predominantly as formalised ponds within Centennial Park. Free-running surface water is only likely to have occurred during storm events.

The hydrology that existed around the study area in 1953 is represented in Figure 2.6. The study area can be seen to flank the southern shore of Lachlan Swamp. It is likely that as a consequence of the lack of surface water flow local human activity would have necessarily been focussed around such swamp environments when inhabiting the Botany Sands substrate.

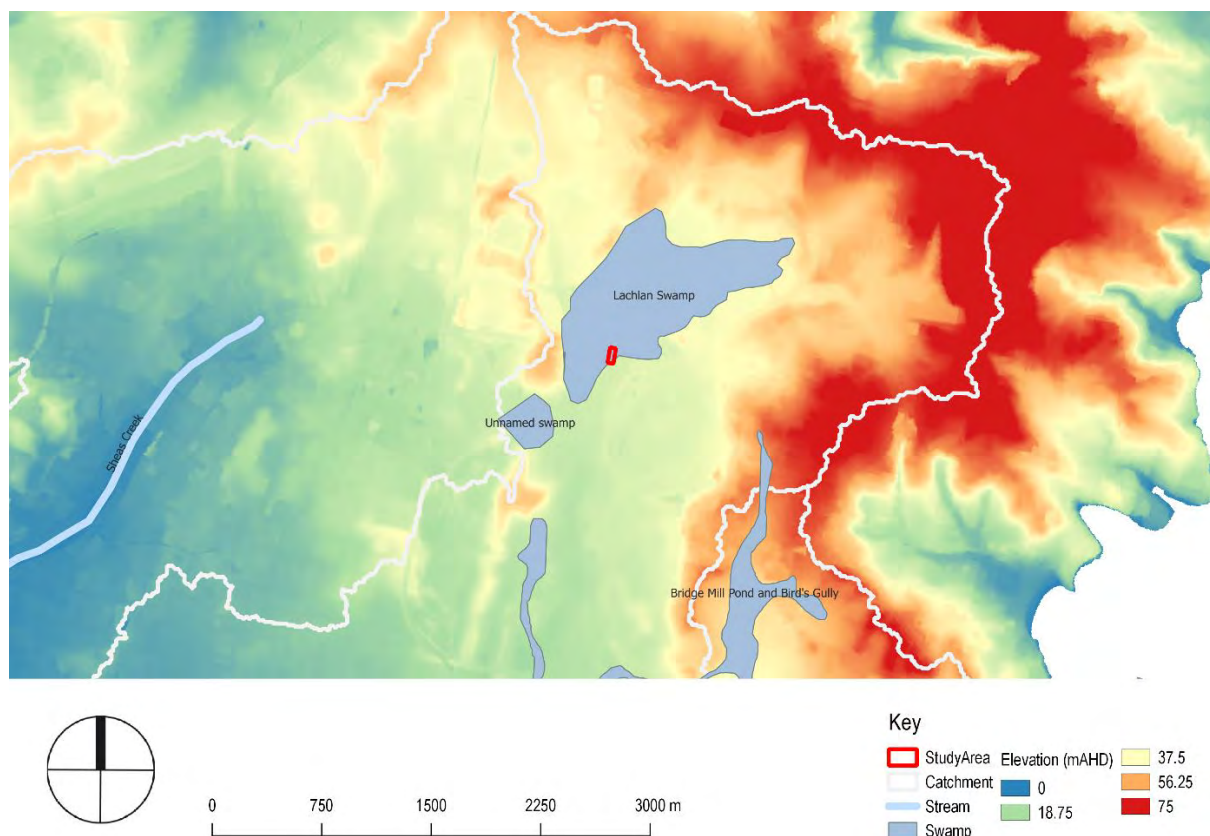


Figure 2.6 Contemporary streams and former swamp systems relative to the contemporary elevations and study area. (Source: Geoscience Australia, Land and Property Information, NSW, Water Board Journal 1953, with GML overlays)

2.3.4 Fauna and Flora

Prior to European colonisation the swamp environments immediately north of the study area were dominated by the woody heath plant *Epacris* and the she-oak *Casuarina*. The ecological community was most likely a sedge-swamp heathland mosaic which is likely to have persisted until at least 1885 despite palynological evidence of European disturbance to the area prior to that time.³⁰

Currently, Eastern Banksia Scrub communities occur on sand substrates, and freshwater sedge swamp communities occur within the wetlands. The Eastern Banksia Scrub is comprised of varied heath, scrub and low-forest communities dominated by shrubs such as *Banksia aemula*, *Xanthorrhoea resinosa*, *Monotoca elliptica*, *Eristemon australasius* and *Ricinicarpus pinifolius*.³¹ The freshwater sedge swamp was characterised by 'patches of tall emergent sedges, fringed with zones of shorter sedges and occasional shrubs'.³²

Plant species likely to have been present in the vicinity of the study area that would have been used by local Aboriginal people include *Melaleuca spp.*, *Banksia spp.* and *Xanthorrhoea spp.* (particularly *Xanthorrhoea resinifera*). Other local food plants in the wider area include the lilly pilly (*Acmena smithii*), various roots and tubers (such as *Blechnum catilagineum*, *B. indicum*, *Eleocharis sphacelata*, *Phragmites australis*, *Triglochin microtuberosum*, *T. rheophilum*, and *Typha orientalis*), native cherry (*Exocarpus cupressiformis*) and the native currant (*Leptomeria acida*).³³

The Eastern Banksia Scrub is likely to have been populated by kangaroos, wallabies, possums, bandicoots, fruit bats (grey-headed flying foxes), and a range of birds, snakes and lizards. The freshwater wetlands would have been inhabited by a diverse range of animals that would have been used by Aboriginal people, including waterbirds, eels, tortoises, freshwater mussels, shellfish and fish.³⁴

2.3.5 Historical Land Use

A history of the study area, recent land use and associated development has been prepared by GBA (2015).³⁵ Relevant portions have been summarised in relation to the Aboriginal history of the area.

Prior to the 1830s there is no recorded use or occupation within or connected with the study area, or indeed the lands surrounding the study area. The first historical activities connected with this area was the establishment of a racecourse (the nearby Sandy Course at Randwick racecourse) in 1833. The racecourse was short lived and in 1838 racing was moved to Homebush. In 1860 racing returned to Randwick, and has continued to this day.

Despite the nearby racing activities, no development or other known activity occurred in association with the study area, until subdivision of the Kensington Estate in 1887. Lots associated with 10-18 Doncaster Avenue were registered and sold in 1893; Lots covering 4-10 Doncaster were registered and sold in 1904. Development within these lots occurred in a single phase with the construction of housing. The history of land use demonstrates a single phase of construction, without demolition or redevelopment. The 1943 aerial (Figure 2.7) shows the pattern of development across the study area, which predominates today. The following development has occurred:

- 4-8 Doncaster Avenue. A single storey house erected in 1914. Out buildings were constructed to the east of the house.
- 10-12 Doncaster Avenue. A two storey semi detached terrace constructed c.1896. Stables were constructed within the lot across the eastern portion of the yards. Sheds and a conservatory were also constructed at number 12.
- 14-16 Doncaster Avenue. Initial development of a corrugated iron cottage at 14 Doncaster Avenue c.1896-1904; which was demolished c.1910 for the construction of a semi-detached cottage at number 16. Out buildings and stables were present to the east of the house.

- 18 Doncaster Avenue. A large single storey brick and weather board house c.1895-1904. This building was demolished after 1943, and the land used for access to the racecourse.
- Services are shown connecting all houses to water and sewers. The service trenches connect on the western side of the study area and sewer connections to the eastern side.

The construction of these houses, out buildings and stables is likely to have required some initial modification to the dune surface and profile, potentially involving flattening and filling any areas with elevations or depressions. Fill is likely to have been brought in, so that a flat and secure platform was formed allowing foundations and/or a slab be built for the various houses. Geotechnical information³⁶ indicates some shallow fill (~0.5m) located in the south of the study area.

The mode of construction may have impacted intact dune profiles associated with the location and yard of each house, or could have buried and compressed the original upper dune surface. The out buildings and yard surfaces surrounding each house could have required less significant work in terms of compression, cutting or filling. Service trenches will have involved deeper excavations through a narrow corridor along the length of each service. This would have impacted the upper dune profile, in an area local to the service.

In summary, the extent of impacts resultant from construction could range from very minimal (if fill were imported and used to flatten the study area, ready for construction) to relatively high, if dune profiles were remodelled and flattened. These impacts are comparable with those in the RSY site adjacent; to confirm the extent of impacts and dune modification geomorphological field investigation and analysis is required.



0 10 20 30 40 m

Key

- Study Area
- Cadastre

Figure 2.7 Study area boundary with 1943 aerial. (Source: Six Maps with GML overlays)

2.4 Ethnohistorical Background

Most of the available ethnohistorical information available for the Aboriginal people who lived around Sydney's CBD comes from the writings of officials who travelled to New South Wales with the First Fleet, including Governor Arthur Phillip, Judge Advocate David Collins, Captain Lieutenant Watkin Tench and Lieutenant William Dawes. Dawes also recorded a large amount of vocabulary of Aboriginal people around Port Jackson, and included notes on pronunciation and grammar. Paintings and sketches were also produced by various artists. These depicted Aboriginal people, camps, tools and weapons.³⁷ A wealth of information is contained in such documents, despite the European bias inherent in the recording of this data.

Much of the information presented below has been extrapolated from Val Attenbrow's 2002 (updated 2010) seminal work on Aboriginal ethnohistory and archaeology at Sydney—*Sydney's Aboriginal Past: Investigating the archaeological and historical records*.³⁸ It has been supplemented with some further research of primary and secondary sources. One key recent record is Paul Irish's *Hidden in Plain View*,³⁹ which details some of the local post-contact history and connections between Aboriginal people and the British settlers.

The account below focuses on the aspects of Aboriginal life that would have left physical evidence in order to develop an understanding of the likelihood of Aboriginal objects to be present at the study area, along with their potential social, aesthetic and historical values.

Accounts of Governor Arthur Phillip and Philip Gidley King identified the Gadigal (also spelt Cadigal) people as the inhabitants of the area between South Head and Darling Harbour. The Wangal were said to have occupied the land from Darling Harbour west to Rose Hill (Parramatta).⁴⁰

This indicates that Kensington was part of the traditional lands occupied by the Gadigal people.

The Gadigal, and other nearby clan groups of the Darug people, would have been among the first Aboriginal people to experience the effects of physical and social dislocation as a result of the arrival and settlement of the First Fleet at Sydney Cove. Furthermore, epidemics of smallpox dramatically affected the Aboriginal population in Sydney. In 1790, Bennelong estimated to Governor Phillip that over half of Sydney's original Aboriginal population had died as a result of the smallpox epidemic that broke out in 1789.⁴¹ Other effects of European colonisation on local Aboriginal populations included loss of access to traditional lands and resources, intertribal conflict, starvation, and the breakdown of traditional cultural practices. The effects of such severe social dislocation may have dramatically altered some aspects of the lives of local Aboriginal people recorded by early European observers.

Following the great losses suffered by local clans with the introduction of European diseases, only very small groups or individual Aboriginal people were recorded as living in the local area surrounding the current study area. Mahroot was an Aboriginal man who described himself as belonging to the 'Botany Bay Tribe' and, in the 1840s, was recorded living around the northern shore of Botany Bay with around 50 other Aboriginal people. Only three were recorded as speaking the same language as Mahroot, suggesting that the group was a merged party of survivors from the Sydney region.⁴² Elders within the La Perouse community have also provided personal accounts of camping and collecting food in Centennial Park in the 1930s. The permanent freshwater supply of the Lachlan Swamps was a focus of this activity.⁴³

Oral history provides a reference to an Aboriginal man known as King Billy Timberly who lived at La Perouse and operated the Randwick toll gate in the 1860s.⁴⁴ This toll gate was located at the northern end of what is now Tay Reserve—also known as Old Toll Bar Reserve until the 1960s. King Billy

Timbery was reportedly the first Aboriginal man employed in the area, but little information is historically recorded about him or his employment. The toll house appears to have been constructed in 1847 and the collection of tolls ceased in 1890. The toll house continued to be used as a residence until its demolition in 1909.⁴⁵ There were two toll gates on Anzac Parade, the other being the extant Moore Park Toll Gate at the corner of Anzac Parade and Cleveland Street.⁴⁶

There is a known historical connection between the La Perouse and Illawarra Aboriginal communities, with historical records indicating many Aboriginal families would move seasonally between the two regions. The Timbery family in particular are commonly referred to in historical and contemporary sources regarding Aboriginal history for both areas, with contemporary descendants, such as Rita Timbery-Bennet who has participated in the Aboriginal Women's Heritage project.⁴⁷

2.4.1 Subsistence Activities

The people that inhabited the coastal regions of Sydney had access to a wide range of natural resources, including terrestrial and marine flora and fauna. For coastal Aboriginal people, marine resources are most likely to have been a vital part of their diet. Watkin Tench, a military officer on the First Fleet, suggests fishing was their primary subsistence activity:

*... [they] wholly depend for food on the few fruits they gather, the roots they dig up in the swamps, and the fish they pick up along shore or contrive to strike from their canoes with spears. Fishing, indeed, seems to engross nearly the whole of their time, probably from its forming the chief part of a subsistence ...*⁴⁸

Other marine resources such as shellfish and crustaceans were likely to have been frequently collected and eaten.

Although marine animals formed a substantial part of the diet of Aboriginal people who lived in and around Sydney, terrestrial animals such as kangaroos, possums, and various birds were also hunted and eaten regularly. The landscape was also manipulated by Aboriginal people through periodic burning of the undergrowth to encourage terrestrial animals such as kangaroos to graze, and thus facilitate hunting. Evidence of this is recorded in the vicinity of Sydney Cove and, despite the close proximity to marine resources, indicates that terrestrial animals were commonly consumed as a food resource.

Written accounts describe the use of a variety of edible plants in the Sydney region, including seeds, fruits and roots. While there are over 200 edible native plant species known in the Sydney region, it is difficult to reconstruct how important each was to the subsistence diet of coastal Aboriginal people. This is largely a result of the discrepancies in recording this information, including the widely different names and descriptions given to different native plant species in the late-eighteenth and early-nineteenth centuries.

2.4.2 Material Culture

The material culture of local Aboriginal groups is also recorded to some extent in early historical accounts, and is reinforced by the archaeological record. Many of the tools were multi-purpose and portable, allowing groups to practice subsistence activities and cultural traditions across the landscape. Aboriginal people made and used a suite of stone tools, and this is one of the most ubiquitous forms of archaeological evidence across Australia. Following contact there are examples of glass, and sometimes ceramic, being knapped in the same way as stone to form tools.

Many other types of tools would have been made of organic materials and most, such as string bags or bark canoes, have not been preserved archaeologically (although some examples are found in

museum and private collections). Some organic materials, such as shell and bone, survive better than others, and are well represented in the historical and archaeological records.

Fish hooks were the most common shell implement in the Sydney area. However, they are unique in Australia to the area between Port Stephens and the NSW/Victorian border, and all date within the last 1000 years. Historical accounts indicate that in the Port Jackson area fish hooks were only used by women and spears were only used by men—although both genders engaged in fishing.

The study area was located in the region of earliest contact between Aboriginal peoples and British colonists, who first landed at Botany Bay to the south and then established a colony at Sydney Cove to the north. Aboriginal peoples were prominent in accounts of early colonial Sydney and are known to have repurposed materials sourced from the colonists. In particular these materials included imported stone material such as ships ballast, bottle glass, and metals.⁴⁹ Because the study area is located near to some of the earliest interactions between Aboriginal peoples and British settlers, there is greater probability that these ‘contact’ period items will be preserved in the archaeological context.

2.4.3 Patterns of Land Use

Many written European accounts and drawings record Aboriginal people who occupied the Sydney region—including the Gadigal—as camping, cooking, and fishing on the open shoreline, estuarine river banks and rockshelters near water. Attenbrow’s analysis of ethnohistorical evidence regarding landscape use indicates a focus of Aboriginal activity on valley bottoms and shorelines.⁵⁰ Attenbrow’s Port Jackson Archaeological Project demonstrated that archaeological sites were similarly patterned in a way that supports this focus.⁵¹ She does, however, caution reliance on these patterns as they are skewed by archaeological preservation factors, as well as biases in what has been portrayed in the historical record.⁵²

A series of pathways crossed the region between Port Jackson and Botany Bay, connecting different parts of Gadigal lands, as well as to areas beyond, for hunting, resource collection, trade, social and ceremonial visits. Aboriginal people moved regularly through Country between permanent settlements, as recorded by colonial writers into the 1800s.⁵³ The dune fields and wetlands of the Botany Basin may have provided a diverse range of significant resources that was likely to have been exploited by the local population. Ethnographic sources provide little specific information regarding how the dune and wetland areas such as those found around the Botany Basin were used by Aboriginal people.

2.4.4 Aesthetic and Regional Character

This section provides a context for the aesthetic values associated with the study area. The *Burra Charter* defines aesthetic value as:

...aspects of sensory perception for which criteria may include consideration of the form, scale, colour, texture and material of the fabric [interpreted as evidence of Aboriginal occupation]; the smells and sounds associated with the place and its use.

The region around the study area is densely urbanised and there has been substantial modification to the original topographic character. The most persistent features of the pre-European environment are the ponds existing within Centennial Park, which are formalised surface expressions of the groundwater that would have previously existed as a sedge-swamp heathland mosaic. These features are likely to have been foci for past Aboriginal cultural and may hold value in terms of representing an ‘unchanged’ character of the area.

2.5 Endnotes

- ¹ Australian Museum Business Services, January 2002, Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks—assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan, prepared for Conybeare Morrison & Partners, pp 14–15.
- ² Etheridge, R, Edgeworth, D and Grimshaw, JW 1897, 'On the occurrence of a submerged forest, with remains of a dugong, at Shea's Creek, near Sydney', in *Journal and Proceedings of the Royal Society of New South Wales*, pp 158–185.
- ³ Haworth, RJ, Baker, RGV and Flood, PJ 2004, 'A 6000 Year-old Fossil Dugong from Botany Bay: Inferences about Changes in Sydney's Climate, Sea Levels and Waterways', in *Australian Geographical Studies*, Volume 42(1), pp 46–59.
- ⁴ AHIMS site card 45-6-0647, 1978.
- ⁵ Crew, D, Archaeological Survey for Aboriginal Sites of the Botany Wetlands, Sydney NSW, report prepared for the Federal Airports Corporation and the NSW Water Board, 1991, p 3.
- ⁶ Godden Mackay Pty Ltd and Austral Archaeology Pty Ltd, December 1997, POW Project 1995—Archaeological Investigation—Volume 2, Archaeology; Part 3—Aboriginal Archaeology, report prepared for the South Eastern Sydney Area Health Service, Heritage Council of NSW and the NSW Department of Health.
- ⁷ Godden Mackay Pty Ltd and Austral Archaeology Pty Ltd, December 1997, POW Project 1995—Archaeological Investigation—Volume 2, Archaeology; Part 3—Aboriginal Archaeology, report prepared for the South Eastern Sydney Area Health Service, Heritage Council of NSW and the NSW Department of Health, p 29.
- ⁸ Godden Mackay Heritage Consultants, Eastern Distributor—Aboriginal Archaeology Monitoring Report, report prepared for Leighton Contractors, May 1997.
- ⁹ Australian Museum Business Services, Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks—assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan, report prepared for Conybeare Morrison & Partners, January 2002.
- ¹⁰ Australian Museum Business Services, Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks—assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan, report prepared for Conybeare Morrison & Partners, January 2002, p 10.
- ¹¹ Dominic Steele Consulting Archaeology, Aboriginal Archaeological Heritage Impact Assessment—Randwick Racecourse, Randwick NSW, report prepared for Godden Mackay Logan, May 2006.
- ¹² Donlon, D, Aboriginal Burials in the Sydney Basin, report prepared for Australian Institute of Aboriginal and Torres Strait Islander Studies, 1995, p 49.
- ¹³ Donlon, D, Aboriginal Burials in the Sydney Basin, report prepared for Australian Institute of Aboriginal and Torres Strait Islander Studies, 1995, p 54.
- ¹⁴ Johnson, BD, Albani, AD, Rickwood, PC and Tayton, JW 1977, 'The bedrock topography of the Botany Basin, New South Wales' in *Australian Journal of Earth Sciences*, 24, pp 403–408.
- ¹⁵ Roy, pp 41–91.
- ¹⁶ Herbert, C 1983, *Sydney 1:100 000 Geological Sheet 9130, 1st edition*, Geological Survey of New South Wales, Sydney.
- ¹⁷ Roy, pp 41–91.
- ¹⁸ Jo McDonald Cultural Heritage Management, Archaeological Salvage Excavation of Site RTA-G1—109–113 George Street, Parramatta, NSW, report prepared for Landcom, 2005.
- ¹⁹ Roy, pp 41–91.
- ²⁰ Roy, pp 41–91.
- ²¹ Hamilton, R and Penny, D 2015, 'Ecological history of Lachlan Nature Reserve, Centennial Park, Sydney, Australia: a palaeoecological approach to conservation', in *Environmental Conservation*, vol. 42, pp 84–94.
- ²² Douglas Partners, Report on Supplementary Geotechnical Investigation, December 2015.
- ²³ Pain, C et al, 2011, *The Physiographic Regions of Australia*, Australian Collaborative Land Evaluation Program and National Committee on Soil and Terrain.
- ²⁴ Chapman, GA, Murphy, CL, Tille, PJ, Atkinson, G and Morse, RJ 1989, 'Soil Landscapes of the Sydney 1:100,000 Sheet' map, Sydney, Department of Environment, Climate Change and Water.
- ²⁵ Roy, pp 41–91.
- ²⁶ Isbell, RF 1996, *The Australian Soil Classification*, Collingwood, CSIRO Publishing.
- ²⁷ McKenzie, N, Jacquier, D, Isbell, R and Brown, K 2004, *Australian soils and landscapes: an illustrated compendium*, CSIRO Publishing.
- ²⁸ Chapman, GA, Murphy, CL, Tille, PJ, Atkinson, G and Morse, RJ 1989, 'Soil Landscapes of the Sydney 1:100,000 Sheet' map, Department of Environment, Climate Change and Water, Sydney.

- 29 Knighton, D 1998, *Fluvial Forms and Processes: A New Perspective*, Hodder, London.
- 30 Hamilton, R and Penny, D 2015, 'Ecological history of Lachlan Nature Reserve, Centennial Park, Sydney, Australia: a palaeoecological approach to conservation', in *Environmental Conservation*, vol. 42, pp 84–94.
- 31 Benson, D and Howell, J 1990, *Taken for Granted: The Bushland of Sydney and its Suburbs*, Kangaroo Press in association with the Royal Botanic Gardens Sydney, Sydney, pp 90–91.
- 32 Benson, D and Howell, J 1990, *Taken for Granted: The Bushland of Sydney and its Suburbs*, Kangaroo Press in association with the Royal Botanic Gardens Sydney, Sydney, p 92.
- 33 Australian Museum Business Services, January 2002, Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks—assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan, prepared for Conybeare Morrison & Partners, pp 6–7.
- 34 Australian Museum Business Services, January 2002, Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks—assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan, prepared for Conybeare Morrison & Partners, p 8.
- 35 GBA, 4-18 Doncaster Avenue, Kensington, Statement of Heritage Impact. Report prepared for Built. 2015.
- 36 Douglas Partners. Proposed Residential Development, 4-18 Doncaster Avenue, Kensington. Report prepared for Built. 2015: Appendix B.
- 37 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney, pp 13–14.
- 38 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney.
- 39 Irish, P 2017, *Hidden in Plain View. The Aboriginal People of Coastal Sydney*, UNSW Press, Sydney.
- 40 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney, p 24.
- 41 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney, p 21.
- 42 Hoskins, I 2000, *Sydney Harbour: A History*, University of New South Wales Press, Sydney, pp 105–106.
- 43 Conybeare Morrison & Partners 2003, Centennial Parklands Conservation Management Plan—Volume 1, prepared for Centennial Park and Moore Park Trust, pp 3–6.
- 44 City Plan Heritage, Draft Conservation Management Plan: The Toll House, Moore Park, report prepared for the Centennial Park and More Park Trust, 2003.
- 45 Casey and Lowe, Archaeological Assessment—Tay Reserve, Centennial Park, report prepared for Centennial Park and Moore Park Trust, 2004, p 7.
- 46 Centennial Parklands, Sydney, 'Moore Park Toll House', viewed 18 June 2015
<http://www.centennialparklands.com.au/about/history_and_heritage/heritage_buildings_and_structures/moore_park_toll_house>.
- 47 Department of Environment and Conservation, 2004, *Aboriginal Women's Heritage: Wollongong*, viewed 18 June 2015
<<http://www.environment.nsw.gov.au/resources/cultureheritage/AboriginalWomensHeritageWollongong.pdf>>.
- 48 Tench, W 1789, *A Narrative of the Expedition to Botany Bay*, pp 13–84, in Flannery, T (ed) 2012, *Watkin Tench: 1788*, the Text Publishing Company, Melbourne, p 53.
- 49 Irish, P 2017, *Hidden in Plain View. The Aboriginal People of Coastal Sydney*, UNSW Press, Sydney.
- 50 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney, pp 47–48.
- 51 Attenbrow, V 1991, Port Jackson archaeological project: a study of the prehistory of the Port Jackson Catchment, New South Wales. Stage I—site recording and site assessment, *Australian Aboriginal Studies*, 1991/No. 2, pp 40–55.
- 52 Attenbrow, V 2002 (second edition 2010), *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney, pp 98–99.
- 53 Conybeare Morrison & Partners 2003, Centennial Parklands Conservation Management Plan—Volume 1, prepared for Centennial Park and Moore Park Trust, pp 3–6.

3.0 Aboriginal Community Consultation

3.1 Introduction

Aboriginal community consultation is required for any assessment of Aboriginal heritage in order to make a valid assessment of Aboriginal (heritage) 'values', especially those Aboriginal memories, stories and associations between the Aboriginal people and their traditional lands or Country. Aboriginal people frequently express an enduring connection to their Country, a connection that transcends generations, both past and present. The connection is frequently expressed as a sense of belonging, which may manifest through physical objects or place; alternatively, it may be presented as an intangible idea, where an appreciation of an unseen quality or non-materialistic value connects a place in the landscape, tradition, observance, custom, lore, belief and/or history to the person or group describing the item, event or value. The notion of intangible, social, or community values is essential to Aboriginal people as 'the effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people'.¹

In order to gather social and community views and opinions with respect to Aboriginal heritage and identify and address Aboriginal heritage values, the OEH requires proponents to adhere to the guideline document *Aboriginal cultural heritage consultation requirements for proponents 2010*.² In addition to providing a mechanism for engaging the Aboriginal community, the directives in the guidelines must be followed for any study that might eventually be used to support an application for an AHIP under Part 6 of the NPW Act.

GML recognises and acknowledges the continuing Indigenous ownership of the traditional knowledge, cultural expressions, practices, innovations and intellectual property rights in the materials provided by RAPs, on which research and assessments in our reports may be based, and endeavours to protect the privacy, integrity and wellbeing of participants in this research.

3.2 The Process of Consultation

These consultation guidelines set out a process involving identification, registration, engagement and consultation with Aboriginal peoples who may hold cultural knowledge relevant to determining the significance of an Aboriginal object and/or place.

Adherence with guidelines involves following a number of stages, which includes:

1. Informing Aboriginal people about the nature and scope of the proposal.
2. Understanding what might be present in the landscape and its cultural significance.
3. Determining the potential impacts and the proposed strategies to deal with them.
4. Reviewing the report.³

Aboriginal groups are invited to register interest as a party to consultation (including the placing of local press advertisement[s]), responses are sought from the Registered Aboriginal Parties (RAPs) on the proposed assessment methodology, and an opportunity to comment on the assessment reports and recommendations is provided to the RAPs. The guidelines specify timeframes for each stage of the consultation process. Further details pertaining to these stages are described below.

The Aboriginal community consultation for this project has been carried out in accordance with the OEH guideline. This chapter contains specific details of Aboriginal community consultation with regard to the heritage assessment of the study area.

The complete log of all communications between GML and RAPs and all letters, responses and details pertaining to this consultation are provided in Appendix A.

3.2.1 Stage 1: Notification of Project

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 area of the proposed project'.⁴ The identification process involves:

- initial letters sent to select government agencies to determine relevant Aboriginal stakeholder groups to contact; and
- placement of a notice in local press, inviting Aboriginal people who hold relevant cultural knowledge to register in the process of community consultation.

A letter notifying all Aboriginal people and the Local Aboriginal Land Council (LALC) about the proposed project must be sent to each individual and group identified through the above stages. Aboriginal people have a minimum of 14 days after the letter was sent or the notice was published in the newspaper to register an interest in the project.

The outcome of Stage 1 is a list of Aboriginal people who have registered for being involved in consultation—the 'Registered Aboriginal Parties' (RAPs). The RAP is to be involved for the remainder of the project; no Aboriginal consultation outside of the RAP is required.

Letters requesting contact details of Aboriginal people or organisations who may hold cultural knowledge relevant to the study area, and any known heritage issues to be taken into consideration in the area (Step 1 notifications), were sent via email on 10 April 2017 to:

- the NSW OEH (Fran Scully, Sam Higgs and Samantha Gibbins);
- Registrar, *Aboriginal Land Rights Act 1983* (NSW);
- the National Native Title Tribunal;
- Native Title Services Corporation (NTSCorp);
- Randwick City Council;
- Greater Sydney Catchment Management Authority;
- La Perouse Local Area Land Council (LALC); and
- Metropolitan Local Area Land Council (LALC).

Responses were received from the following groups:

- the NSW OEH (Fran Scully, Sam Higgs and Samantha Gibbins);
- Registrar, *Aboriginal Land Rights Act 1983* (NSW);

- the National Native Title Tribunal;
- Randwick City Council; and
- Greater Sydney Catchment Management Authority.

Subsequently, those Aboriginal people who were identified during the Step 1 notifications were contacted via letter on 28 April 2017, providing information regarding the project and inviting them to register an interest (Step 2 notifications). A notification was also placed in the *Southern Courier* on 18 April 2017, inviting registrations of interest by Aboriginal people with cultural knowledge relevant to the project area. The following 15 Aboriginal groups/people registered an interest (in alphabetical order):

- A1 Indigenous Services;
- Aboriginal Archaeology Service Inc (AAS);
- Biamanga;
- Corroboree Aboriginal Corporation;
- Cullendulla;
- Darug Aboriginal Cultural Heritage Assessments;
- Darug Custodian Aboriginal Corporation (DCAC);
- Darug Land Observations (DLO);
- Didge Ngunawal Clan;
- Gulaga;
- La Pouse Local Aboriginal Land Council;
- Murramarang;
- Rane Aboriginal Heritage Consultants;
- Tocomwall; and
- Widescope Indigenous Group.

A copy of the notification and the details of registered Aboriginal parties was provided to OEH and the LALC on 29 May 2017.

Registered Aboriginal Parties

In line with the outcomes of Stage 1 following OEH 2010, Appendix B,⁵ there are 15 Registered Aboriginal Parties (RAPs), who have been consulted during the preparation of this report:

- A1 Indigenous Services;
- Aboriginal Archaeology Service Inc (AAS);
- Biamanga;

- Corroboree Aboriginal Corporation;
- Cullendulla;
- Darug Aboriginal Cultural Heritage Assessments;
- Darug Custodian Aboriginal Corporation (DCAC);
- Darug Land Observations (DLO);
- Didge Ngunawal Clan;
- Gulaga;
- La Perouse Local Aboriginal Land Council;
- Murramarang;
- Rane Aboriginal Heritage Consultants;
- Tocomwall; and
- Widescope Indigenous Group.

3.2.2 Stage 2 and Stage 3: Presentation of Information and Gathering Information About Cultural Significance

On 22 May 2017, a letter was sent to all RAPs informing them of the project outline, project impacts, the timeline and milestones of the project. Included was a methodology for undertaking the archaeological and geomorphological assessment and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area. A period of 28 days was allowed for the RAPs to respond (19 June 2017).

All stakeholders agreed to the proposed methodology. Table 3.1 is a summary of all RAP submissions made during the consultation period in relation to the project and Aboriginal cultural heritage values.

Table 3.1 RAP Comments with Respect to the Proposed Methodology and Cultural Heritage Values Within or Associated with the Study Area.

#	RAP	Date of Sent	Date of Reply	Comment
1	Darug Aboriginal Cultural Heritage Assessments	22 May 2017	29 May 2017	Celestine Everingham advised by phone that she accepts our methodology.
2	A1 Indigenous Services	22 May 2017	22 May 2017	A1, AHCS and Widescope agree with the methodology for 4–18 Doncaster Avenue Provision Project created by GML Heritage.
3	Aboriginal Archaeology Service Inc (AAS)	22 May 2017	23 May 2017	Aboriginal Archaeology Service agrees with the above proposed assessment methodology.
4	Corroboree Aboriginal Corporation	22 May 2017	1 June 2017	We see no issues with methodology provided to Corroboree Aboriginal Corporation.
5	Darug Custodian Aboriginal Corporation (DCAC)	22 May 2017	23 May 2017	We support the recommendations set out in this report.

#	RAP	Date of Sent	Date of Reply	Comment
6	Darug Land Observations (DLO)	22 May 2017	2 June 2017	Darug Land Observations Pty Ltd has reviewed the archaeological and cultural heritage assessment and supports the methodology for the proposed demolition of the existing building and construction of a new three-storey residential flat building at 4–18 Doncaster Avenue, in Kensington. In relation to the long-term storage of recovered artefacts, if any, Darug Land Observations Pty Ltd strongly believes that the recovered artefacts should be re-buried on Country (the study area).
7	La Perouse Local Aboriginal Land Council	22 May 2017	19 June 2017	The La Perouse LALC generally supports the proposed methodology outlined in the document, Reference 17-0058pb1, compiled by GML Heritage and dated 22 May 2017.
8	Widescope Indigenous Group	22 May 2017	26 May 2017	I have been sent information Re: 4–18 Doncaster Avenue project. I agree and seek to endorse the project methodology.
9	Didge Ngunawal Clan	22 May 2017	24 May 2017	DNC would just like to know what is going to happen to the artefacts once they are found, if they're being reburied, for educational use or in a museum. DNC agrees on the methodology at 4–18 Doncaster Avenue.

3.2.3 Stage 4: Review of Draft ACHA Report

The draft ACHAR (this report) was provided to the RAPS on 25 July 2017. A period of 28 days was allowed for their comments (18 August 2017). Following 18 August 2017, until the production of this ACHAR, no further comments were received.

Table 3.2 RAP Comments with Respect to the Draft Cultural Heritage Assessment Report

RAP	Date Sent	Date Reply	Comments and/or cultural values identified
Darug Aboriginal Cultural Heritage Assessments	25/07/2017	11/08/2017	Agree with the ACHAR
A1 Indigenous Services	25/07/2017	21/08/2017	A1 and AHCS support the Methodology and Aboriginal Cultural Heritage Assessment Report created by GML Heritage
Aboriginal Archaeology Service Inc (AAS)	25/07/2017	27/07/2017	Aboriginal Archaeology Service agree with the above proposed Assessment Methodology.
Darug Custodian Aboriginal Corporation (DCAC)	25/07/2017	30/07/2017	Aboriginal Archaeology Service agree with the above proposed Assessment Methodology.
Gulaga	25/07/2017	01/08/2017	Gulaga agrees with/accepts the report for Doncaster Ave, Kensington

RAP	Date Sent	Date Reply	Comments and/or cultural values identified
La Perouse Local Aboriginal Land Council	25/07/2017	18/08/2017	The La Perouse LALC is very concerned about the close proximity of the proposed development at 4-18 Doncaster Avenue, Kensington, to the recorded Aboriginal site at the Randwick Stabling Yards, and the potential impacts upon the site arising from the development. The La Perouse LALC is also concerned that the Randwick Stabling Yards site may extend into the proposed development area, or that there is potential for other Aboriginal objects to be found during excavation of the proposed development. The La Perouse LALC is generally supportive of the report's conclusions and recommendations, and of the measures that are outlined in the Archaeological Technical Report (Appendix E).

All RAPs agreed with the proposed project methodology. The LALC provided further comments; in response, GML note that the portion of site RSY 1 will be conserved during the development work. As far as GML is aware, the Light Rail stabling yards will not encroach into the Doncaster site study area. There is a potential for further Aboriginal objects to be located within the Doncaster PAD area; this has been the subject of this report and its intended management.

3.3 Summary of Aboriginal Cultural Values Identified

Beyond the values associated with the previously identified Aboriginal site RSY1, the study area has not been identified to hold further Aboriginal values. The study area has been identified by some RAPs to hold potential for further Aboriginal objects, which, if present, may hold scientific and social value. This is recognised through the AHIMS listing of the Doncaster PAD.

3.4 Endnotes

- ¹ DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.
- ² DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.
- ³ List taken from DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney, p 10.
- ⁴ DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney, p 10.
- ⁵ DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

4.0 Synthesis of Background Information

This background assessment compiles, analyses and synthesises previous information and relevant contextual information to gain an initial understanding of the cultural landscape within its environmental context.

4.1 The Physical Setting and Landscape Description

Details of the past and present environments in and around the study area are provided in Section 2.2 and the following analysis follows from it. The study area was found to be situated on a deep sequence of sandy sediments, with approximately the upper 10m having been deposited within the timeframe of human occupation of Sydney region. The local topography is a subcatchment that drains centripetally southwest towards Botany Bay, although the high permeability of the substrate has caused a low drainage density and surface flow would have been rare excepting during storm events. Instead, the sandy substrate has acted as an aquifer with surface expressions of water occurring where groundwater intersects the surface, usually in the swales between dunes.

Because of a lack of surface flow around the study area, local human activity would have focused on the swamp environments developed in the swales of dunes. The most recent configuration of swamp areas largely conforms to the formalised ponds of Centennial Park and the dammed Botany Swamps (Figure 2.8). The aeolian formation of the deep stratigraphy indicates that the contemporary configuration of surface hydrology may have varied substantially in the past. Because surface water was expressed where prior dune swales intersected the groundwater, lateral shifting of dunes cause a proportional shift of those intersections. The sediments accumulated in swamps may also act as aquitards in an increasingly complex aquifer architecture and hence change subsurface water potential, causing independent alterations to where groundwater might intersect the surface.

From the above it can be inferred that the focus of human activity around the local swamp resources is likely to have shifted laterally over time, maybe substantially. Locations close to the current surface water sources, including the study area, can be more confidently regarded to have higher archaeological potential in the younger upper units of the aeolian deposits of the Botany Sands (eg nearer to the surface). It is less certain whether the deeper deposits would have similar potential because it is not known whether those locations were similarly close to a water source.

The natural environment has been substantially altered since European colonisation. Although the broader terrain is unlikely to have changed substantially, the microtopography of the original dune topography has been substantially altered to accommodate the dense urban environment that has developed. This process is likely to have included truncation of dune crests and filling of dune swales; however, while truncation of dune crests would have removed the recent archaeological context at those locations, the archaeological context continues up to 10m in depth and so filling of swales would simply preserve that context.

4.2 History of the Peoples Living on the Land

Much of the history of Aboriginal land use prior to British colonisation has been deduced over time from archaeological excavations. The fragmented record affords only a small view of durable material culture and hence only of sequences of material change and the spatial locations in which they occur. However, that record becomes richer and less fragmented as more sites are investigated and as more subtle features of those sites are recognised as cultural remains. Nevertheless, the archaeological

record as it stands provides definitive evidence of the antiquity of Aboriginal presence and culture far beyond the historical and anthropological evidence.

The Gadigal people were identified by historical accounts as occupying the traditional lands within the study area, now Kensington. It is very likely that the Gadigal experienced social dislocation from this place with the arrival of the European colonisers, disease, and other hardships. However, there are accounts of a return to the wider region by Aboriginal figures such as King Billy Timberly in the 1860s, and by Aboriginal people camping and collecting food in Centennial Park in the 1930s.

As such there is a layered history of Aboriginal people within the area, which captures the early subsistence, social dislocation, and resilience of these groups. No specific cultural value related to these themes of Aboriginal ethnohistory has been identified within the study area.

4.3 Material Evidence of Aboriginal Land Use

A number of archaeological sites are registered across the Botany Sands substrate environment. A search of the OEH Aboriginal Heritage Information Management System (AHIMS) in June 2017 identified eight sites within 3km of the study area, and one more site restricted in the AHIMS database but known to GML through previous investigations. The registered sites included seven open sites including one midden and one rock engraving, and one closed site rockshelter with art. The distribution of those sites is predominantly concentrated around the Centennial Park area apparently supporting the model presented in Section 2.3.3 that local human foci would necessarily occur around swamp resources. However, few overall sites are listed overall and alternatively it might be that the distribution is simply chance; one speculation may be that more intensive investigations have occurred in the areas around Centennial Park because it is a public resource and potentially subject to greater public scrutiny.

The type of evidence likely to be excavated from an undisturbed archaeological context may include stone objects, middens and burials, but also potentially European stone materials, bottle glass and modified metal objects in the case of 'contact' period materials. Stone objects would invariably have been imported into the area as there is no direct source of suitable stone available within the Botany Sands. Indeed, the occurrence of gravel-sized objects within an otherwise undisturbed sand context is likely to have been a manuport in situations where modifications cannot be identified. Table 4.1 lists the objects and sites most likely to occur within the Botany Sands substrate.

Table 4.1 Types of Aboriginal Sites that may be Located within the Study Area.

Feature	Description and Potential Location
Stone objects	Stone artefact concentrations are collections of stone, frequently brought from other areas, which demonstrate evidence for Aboriginal working, use and/or discard of the stone at a single location. Stone artefact concentrations may be associated with any of the below site types. Where such sites are buried by sediment they may not be noticeable unless exposed by erosion or disturbed by modern activities. Stone artefacts may occur stratified up to approximately 10m in depth within the Botany Sands. Stone is likely to comprise the typical Sydney assemblages, linked to the Eastern regional sequence. There is possibility for time-depth stratigraphy within the dunes at Doncaster Avenue. Further, stone items (such as iron stone or sandstone) which appear to be manuports (and not Aboriginal objects), may, if archaeological associated with a verified Aboriginal deposit, be connected with Aboriginal use of the place.

Feature	Description and Potential Location
Contact period objects	Contact period objects are objects that were evidently originally of non-Australian origin, manufacture or utility, that have subsequently been evidently modified or utilised by an Aboriginal person. In Sydney this regularly comprises glass, ceramic and metal items. Such items are often difficult to attribute to Aboriginal use, but post excavation analysis of the material, its archaeological context and possible use wear analysis can provide insight. These sites are likely to occur in the upper stratigraphic units of the Botany Sands.
Shell middens	Middens predominantly consist of accumulations of shell that represent the exploitation and consumption of shellfish by Aboriginal people. Shell species may be marine, estuarine or freshwater depending on the environmental context. Middens frequently also include faunal remains, stone artefacts, hearths and charcoal. These sites may occur stratified up to approximately 10m in depth within the Botany Sands.
Burial sites	Burials may be of isolated individuals, or they may form complex burial grounds. Often associated with other site types such as middens, or mounds. These sites may occur stratified up to approximately 10m in depth within the Botany Sands. Whilst not expected, these sites could occur. If identified, burials would require assessment and management further to that under the AHIP sought by this project.
Resource area	Resource gathering areas represent landforms that contain a high number of fauna and flora species, which were known Aboriginal resources. Resource areas are frequently associated with permanent water resources, often swamps or marshes, and frequently have recorded sites such as middens nearby. Landforms associated with these sites are often flats with a favourable outlook. These features may occur stratified up to approximately 10m depth within the Botany Sands.

4.4 Limitations of the Background Analysis

The background analysis presented in Section 2 was limited by its current physical setting in an urbanised environment. The original topography is likely to have been substantially altered and there are no existing natural incisions into the substrate that provide a direct view of its architecture. It was also limited by the fragmented character of the local archaeological record which was similarly in part a result of the local urbanised landscape. Limitations also exist in the historical records which have often failed to account for the more domestic activities of Aboriginal life during the period of colonisation. Lastly, knowledge imparted by the RAPs may also have been restricted for cultural reasons.

5.0 Cultural Heritage Value and Statement of Significance

The primary guide to the assessment of heritage value and significance is the Burra Charter. The Burra Charter defines cultural significance as:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

In line with the Burra Charter's four principal values (social, historical, scientific and aesthetic) and the NSW Heritage's Office's publication *Assessing Heritage Significance*,¹ four assessment criteria can be used to assess the Aboriginal heritage values of the study area.²

The four criteria are:

- Social value³—'an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons';
- Historic value⁴—'an item is important in the course, or patterning, of NSW's cultural or natural history (or cultural or natural history of the local area)';
- Scientific value⁵—'an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area); and
- Aesthetic value⁶—'an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)'.

Consultation with the RAPs and investigation into the background history of the study area and local region has allowed for an understanding of the key values associated with social, historic and scientific value.

Ongoing Aboriginal community consultation will be required to identify social and aesthetic values associated with the project area, and any values connected with the wider landscape identified throughout the investigation. The Aboriginal community will be given an opportunity to provide feedback on the final draft of the ACHAR once physical investigation of the study area is completed and reported in an accompanying Aboriginal Technical Report (ATR). The feedback from the Aboriginal community would then be included in the significance assessment.

5.1.1 Grading of Significance

Following the OEH 2011 Guide,⁷ heritage values will be graded in accordance with a basic ranking of high, moderate or low. The ranking is based on the research potential, representativeness, rarity and educational potential of each value. The grading is stated at the end of each value assessment.

5.2 Significance Assessment

5.2.1 Social Value

The study area holds social value to the Aboriginal community as a place associated with long-term Aboriginal occupation, and as a component of their wider Country. The study area meets this criterion at a high level. The significance manifests through:

- the potential archaeological deposits, which the community views as holding a high level of research potential;
- the potential for stratification of archaeological deposits, which increases the research potential by providing a means to assess material change over time;
- the potential to accurately date stratified archaeological deposits by means of optically stimulated luminescence and thereby provide tangible evidence of the antiquity of their presence and cultural connection in this area;
- the potential for material evidence of the contact period given the location of the study area within the region of earliest British colonisation; and
- a level of community social value for the site's potential to provide educational and interpretive outcomes, which may provide new understanding to the general public.

5.2.2 Historical Value

The study area holds moderate historical value because the local Aboriginal community has identified a contemporary social and historical connection. While there is no known direct connection between identified Aboriginal people and/or historical records and the study area, the Aboriginal community holds the opinion that the landscape of the wider region is associated with early interactions between Europeans and Aboriginal people.

5.2.3 Scientific Value

The study area contains two distinctly different areas: one with an archaeological deposit—the remnant portion of the RSY 1 site (which contains an archaeologically proven deposit); and another with archaeological potential, covering the remainder of the study area—described as Doncaster Avenue PAD (which has archaeological sensitivity). Each area needs to be described on its own merits, on the basis of the known and/or likely ability to further inform the archaeological and environmental record. A brief statement relating to each of the two distinct areas is provided.

Research Potential

The Doncaster Avenue PAD hold the potential to address questions relating to both the archaeological and environmental record of the Randwick region. Archaeologically, the area with PAD could contain deposits associated with Aboriginal habitation (most likely stone artefacts, manuported stone, hearths and possibly shell). Investigations of these deposits could provide further information on long term Aboriginal habitation, patterns of economic use—particularly in respect to changing regimes of stone use, and access to the ecological resources of the Lachlan Swamps.

The RSY 1 site contains an archaeological deposit which has previously been characterised through excavations. The remnant deposit is unlikely to contain information divergent from that previously excavated. As such, the research potential of the extant portion of RSY 1 does not extend beyond that already recognised or realised.

Integrity and Condition

The integrity of the Doncaster Avenue PAD cannot be determined until geomorphological and/or archaeological investigations are undertaken.

The RSY 1 site exhibits varying levels of disturbance, which have resulted in some lifting and mixing of archaeological deposits into overlying layers of fill. However, the topsoils of the upper dune profile retain a portion with good integrity and condition. The depth of the intact layer varies between 50mm and 300mm.

Complexity

The Doncaster Avenue PAD has the potential ability to yield a complex assemblage (of stone and/or shell) and/or features (hearths, fire pits, activity areas), from stratified archaeological deposits. Further, it has the potential to yield complex geomorphological and ecological deposits if the swamp deposits present within the adjacent RSY site extend into the north of the PAD area.

The RSY 1 site is predominantly composed of a single archaeological deposit contained within a sand dune topsoil and is not archaeologically complex.

Archaeological Potential

The Doncaster Ave PAD has potential to yield stratified archaeological deposits that could address complex research questions relating to both changing ecological regimes and the Aboriginal adaptation to these changes. Analysis of archaeological materials could provide new insight into changing resource availability (eg the availability of different stone resources), changing local technologies (changes in style of stone or shell manufacture), altered patterns of food resources (new species of shellfish or other foods being introduced), and changing environmental conditions (through analysis of the sediment and pollen record).

The RSY 1 site holds archaeological potential for intact deposits of stone objects, which would be a continuation of those already excavated. The archaeological potential for the remnant extant portion of the RSY 1 site is high, namely in terms of conservation of the remnant portion of the site.

Connectedness

The connectedness of the Doncaster Avenue PAD cannot be described until an archaeological deposit is identified.

The RSY 1 site is unusual in that its content cannot be linked to other regional site types, notably in terms of the material type present or its frequency.

Representativeness

The representativeness of the Doncaster Avenue PAD cannot be described until an archaeological deposit is identified.

The RSY 1 site is low in that it is not reflective of other archaeological sites in the local or wider region.

Rarity

The rarity of the Doncaster Avenue PAD cannot be described until an archaeological deposit is identified.

The RSY 1 site can be described as locally and regionally rare, in that the combination of archaeological content, material type and landscape connection has not been previously identified.

Education Potential

Both the Doncaster Avenue PAD (if it contains an archaeological and/or ecological signature) and the RSY 1 site have teaching potential to demonstrate past Aboriginal material culture and environments, and their concomitant change over time.

Archaeological Landscapes

Both the Doncaster Avenue PAD (if it contains archaeological and/or environmental evidence) and the RSY 1 site are a component of the wider Aboriginal cultural landscape, which extends in connection with the coastal territory of the local Aboriginal population. The archaeological and sediment deposits are reflective of the local dune system, positioned on the margins of an extensive wetlands system, distinctly different to locations to the immediate west. The presence of archaeological sites within this landscape may be able to provide new insight into long term patterns of Aboriginal habitation, their economy and perhaps changing social regimes. Whilst this social and cultural landscape changed at the point of colonisation, it was maintained by Aboriginal people and remains active today.

5.2.4 Aesthetic Value

There has been substantial modification to the original topographic character of the study area and its surrounds, excepting the persistence of pre-European swamps as formalised ponds located in Centennial Park. The ponds cannot be viewed from the study area and vice versa; the aesthetic value of the study area is therefore regarded as low. To date there is no known aesthetic value of the study area held by the Aboriginal community, although this may come from ongoing consultation with RAPs. There is also the potential for the identification of objects with aesthetic value from physical investigation of the study area.

5.3 Statement of Significance

The study area holds value to the Aboriginal and archaeological communities because of its importance as a component of the social, historical and scientific landscape of the Botany Sands environment. This value manifests itself through the site's substantially high research potential for the tangible evidence of the antiquity of Aboriginal presence and cultural connection in this area, and the contemporary social connection and community appreciation of the site as part of the wider landscape.

The study area contains a potential archaeological deposit (the Doncaster Ave PAD) that, if investigated, would be likely to greatly further scientific understanding and knowledge of long-term Aboriginal occupation of the Botany Sands. The scientific significance of the Doncaster Ave PAD is high because of its known and potential archaeological, geomorphological and ecological deposits. The Doncaster Ave PAD has the potential to yield deeply stratified Aboriginal sites which, if archaeologically excavated and assessed, may provide new and further insight into changing stone material and technological use, as well as the advent of shellfish hook use by the coastal population.

The study area is located on the margins of an extensive wetland system, which would have been used by Aboriginal people for fresh water, food and other resources. Analysis of environmental evidence potentially existing within the study area may provide insight into shifting ecological resources, that were known to have altered through the late Quaternary. The extant portion of site RSY 1 is scientifically important as a conservation resource due to its regional rarity and education potential, and the realised research value through previous archaeological excavation.

An overview of how cultural values are manifest within the study area is presented in Table 5.1.

Table 5.1 Summary of Aboriginal Cultural Heritage Values.

Value	Summary	Grade of Significance
Social	The social values are manifest through: - the Aboriginal community's appreciation of the social values of the wider area surrounding the study area as an area that was occupied by their ancestors; - the site's connection with contact-period Sydney and the wider social landscape of the area; and - the value placed by the Aboriginal community on the potentially high scientific value of the study area.	High
Historic	The historic values are manifest through: - a few direct connections between specific historical events and this land; and - early interactions between Europeans and Aboriginal people.	Moderate
Scientific	The scientific values are manifest through: - the deep stratigraphy of the study area that may capture the entire period of Aboriginal occupation of the study area; - the ability to accurately date stratified deposits by optically stimulated luminescence (OSL); and - the potential for stratified environmental evidence such as a pollen record that may enable reconstruction of the vegetated environment.	Potentially high
Aesthetic	The aesthetic values are manifest through: the urban streetscape with substantial topographic modifications.	Low

5.4 Endnotes

¹ NSW Heritage Office 2001, *Assessing Heritage Significance*.

² OEH 2011, *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, provides a background to undertaking an Aboriginal cultural heritage values assessment in accordance with the Burra Charter and NSW Heritage Office's *Assessing Heritage Significance* 2001. The approach recommended by OEH has been adhered to for this report.

³ NSW Heritage Office 2001, *Assessing Heritage Significance*, Criteria D.

⁴ NSW Heritage Office 2001, *Assessing Heritage Significance*, Criteria A.

⁵ NSW Heritage Office 2001, *Assessing Heritage Significance*, Criteria E.

⁶ NSW Heritage Office 2001, *Assessing Heritage Significance*, Criteria C.

⁷ OEH 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Sydney, Office of Environment and Heritage.

6.0 The Proposed Activity

This section provides a description of the proposed activity, timing for the activity, Aboriginal values that may be harmed (directly or indirectly) by the activity, and the objectives of the proposed activity.

This report has been prepared for an AHIP application that will allow geophysical, geological and archaeological field investigations leading to salvage excavation of the PAD. It is known that archaeological deposits occur within the substrate of part of the study area (site RSY 1) and potentially across the extent of the Doncaster PAD. The proposed activity will potentially disturb the PAD area, and conservation measures for RSY 1 are deemed an impact under the *NPW Act 1974*.

For the development to proceed a program of investigation leading to salvage excavation is required to identify, recover and document the possible cultural materials and environmental evidences associated with the Doncaster PAD. The proposed development will be referred to as the 'activity', which would eventually result in an impact to the Aboriginal archaeological deposits.

6.1 Summary of the History of the Area

A history of the study area, recent land use and associated development has been presented in Section 2.3.5. In summary, there was no recorded use of the lands surrounding the study area prior to the 1830s. The first historical activity connected with this area was the establishment of a racecourse (the nearby Sandy Course at Randwick Racecourse) in 1833 for a short time. Racing returned to Randwick in 1860 and has continued to this day.

Despite the nearby racing activities, no development or other known activity occurred in association with the study area until subdivision of the Kensington Estate in 1887. Lots associated with 10–18 Doncaster Avenue were registered and sold in 1893; lots covering 4–10 Doncaster were registered and sold in 1904. Development within these lots occurred in a single phase with the construction of housing.

The construction of these houses, outbuildings and stables is likely to have required some initial modification to the dune surface and profile, potentially involving flattening and filling any areas with elevations or depressions. Fill is likely to have been brought in, so that a flat and secure platform was formed allowing foundations and/or a slab be built for the various houses. Geotechnical information¹ indicates some shallow fill (~0.5m) located in the south of the study area. The mode of construction may also have impacted intact dune profiles associated with the location and yard of each house, or could have buried and compressed the original upper dune surface.

6.2 Impact Assessment

6.2.1 Description of Proposed Development

The study area is located within the Randwick local government area in the parish of Alexandria at 4–18 Doncaster Avenue, Kensington. The boundaries of the study area are indicated in Figure 6.1 and are inclusive of the following lots:

- Lots 2 and 3, DP 5549;
- Lot 1 DP 1094702;
- Lot 1 DP 981704;

- Lot 1 DP 974821;
- Lot 1 DP 1033442;

- Lot 51 and 53, DP 2905; and
- Lot 52A and 52B, DP 400051.

Built proposes to demolish existing dwellings at 4–8, 14, and 16 Doncaster Avenue and the non-heritage rear portion of the existing terraces to 10 and 12 Doncaster Avenue and construct a new three-storey residential flat building comprising 48 dwellings and a basement carpark for 71 vehicles. The existing heritage front portion of terraces at 10 and 12 Doncaster Avenue will be retained and refurbished. Drawings associated with the approved development application (DA) are supplied in Appendix C.

6.2.2 Identification of Impacts

The approved development will impact the entire Doncaster Ave PAD to varying degrees. The site RSY 1 will be conserved, however this requires construction of a retaining 'box' around the identified extent of the site. This is detailed in Section 7.1.1; the engineering diagrams detailing the works are in Appendix D.

For the Doncaster Ave PAD, impacts will arise from excavation of a basement carpark to accommodate residents' vehicles, and the foundations for the proposed structures. Connection of services will also impact the subsurface. Landscaping the ground surface surrounding the residential structures is likely to only impact historical fills known to occur at the surface in the southern portion of the study area. The northern area is known to be sand at the surface, although the integrity of that sand is uncertain (Section 2.4.1) and must be presumed to be archaeologically sensitive until shown otherwise.

6.3 Harm to Aboriginal Objects and Values

The study area has been shown to include one site, one area with PAD, no Aboriginal places and part of a wider Aboriginal cultural landscape. Site RSY 1 (45-6-3246) is located immediately adjacent to the southeast of the study area, overlapping it slightly (Figure 6.1). The Doncaster Avenue PAD (45-6-3245) (Figure 6.1) precisely covers the boundaries of the study area. The values associated with the sites identified in and around the study area were presented in Section 5.2. Table 6.1 presents the Aboriginal sites that will be harmed by the proposed activity, and the type, degree and consequence of that harm.

Table 6.1 Impact to Known Aboriginal Heritage.

Site	Type of Harm	Degree of Harm	Consequence of Harm
RSY 1	Indirect	Partial	Partial loss of value
Doncaster Avenue PAD	Direct	Total	Total loss of value
Wider cultural landscape	Indirect	Partial to none	Partial loss of value

6.3.1 Project Justification

The proposed activity is likely to harm Aboriginal objects as defined by the NPW Act. This harm cannot be limited because of the nature of the development, although provisions have been made to conserve a known archaeological site (RSY 1) at the southeast of the study area. Approval under Section 90 of

the NPW Act in the form of an Aboriginal Heritage Impact Permit (AHIP) is required to allow impact to this evidence for the project to proceed.

Table 6.2 Overview of Impacts to Values, if Unmitigated

Value	Summary	Degree of Harm	Consequence of Harm
Social	The social values are manifest through: - the Aboriginal community's appreciation of the social values of the wider area surrounding the study area as an area that was occupied by their ancestors; - the site's connection with contact-period Sydney and the wider social landscape of the area; and - the value placed by the Aboriginal community on the potentially high scientific value of the study area.	Partial	Partial loss of value
Historic	The historic values are manifest through: - a few indirect connections between specific historical people and the surrounding landscape; and - early interactions between Europeans and Aboriginal people.	None	None
Scientific	The scientific values may be manifest through: - the deep stratigraphy of the study area that may capture the entire period of Aboriginal occupation of the study area; - the ability to accurately date stratified deposits by optically stimulated luminescence (OSL); and - the potential for stratified environmental evidence such as a pollen record that may enable reconstruction of the vegetated environment.	Total	Total loss of value
Aesthetic	The aesthetic values are manifest through: the urban streetscape with substantial topographic modifications.	None	None

7.0 Avoiding and Minimising Harm

One Aboriginal heritage item (Doncaster Ave PAD) could be directly impacted by the proposed activity. Site RSY 1 will be indirectly impacted, but conserved during the works. The following management and mitigation statements are based on consideration of:

- legal requirements under the terms of the NPW Act, as amended—which states that it is illegal to harm or desecrate an Aboriginal object without first obtaining an AHIP from the Director-General, OEH, NSW;
- the OEH Code of Practice, which was adopted by the *National Parks and Wildlife Regulation 2009* (NSW) (NPW Regulation) made under the NPW Act, and which came into force on 1 October 2010;
- the assessment of the Aboriginal cultural heritage values in the subject area;
- the interests of the local Aboriginal community members who participated in this project; and
- the size of the study area, the size of the remaining areas with archaeological sensitivity, and likely impacts posed by the project proposal.

7.1 Strategy—Avoidance

Avoidance of heritage sites represents the best heritage outcome as it means no impact to the identified heritage features. Avoidance of direct impact to RSY 1 is to occur by designating it into a conservation management zone (Section 7.1.1), which will preserve the intact dune layers with archaeological deposits and Aboriginal objects. Impacts to the Doncaster Ave PAD will be total and will require mitigation by alternative strategies.

7.1.1 Conservation Management Area

The portion of archaeological site RSY 1 that intersects the study area is to be avoided and conserved as a ‘conservation management area.’ The precise location of the conservation management area is shown in Figure 7.1. The location of the conservation management area requires installation of a drainage culvert because of the prevailing hydrological circumstances of the local topography. The drainage culvert cannot be diverted from its intended location and consequently has been designed in collaboration with GML Heritage in a manner that preserves the underlying archaeological site.

The design of the culvert has taken a non-invasive approach including at the end-of-life of the structure, which can be easily removed without impact to the subsurface (and thus the archaeological deposit). Detailed design plans can be viewed in Appendix C. A schematic cross-section of the culvert design is presented in Figure 7.2 and includes:

- geofabric covering the current ground surface inclusive of the conservation management area;
- an imported fill covering the geofabric and acting as structural support to the culvert; and
- placement of the culvert on top of the imported fill in a non-invasive ‘floating’ design.



Figure 7.1 Conservation management area within the study area. (Source: Land and Property Information, NSW, with GML overlays)

The only physical impact to the conservation management area as a result of the placement of the culvert will include a distributed overburden (which is fill and not archaeological) and desiccation of the substrate (which will not impact/harm the extant Aboriginal objects). A distributed overburden is likely to have less impact than more direct and pervasive surface forces such as grazing livestock.¹ Desiccation of the substrate is arguably beneficial as chemical soil forming processes are largely driven by water; the absence of water will therefore act to preserve the current soil environment.²

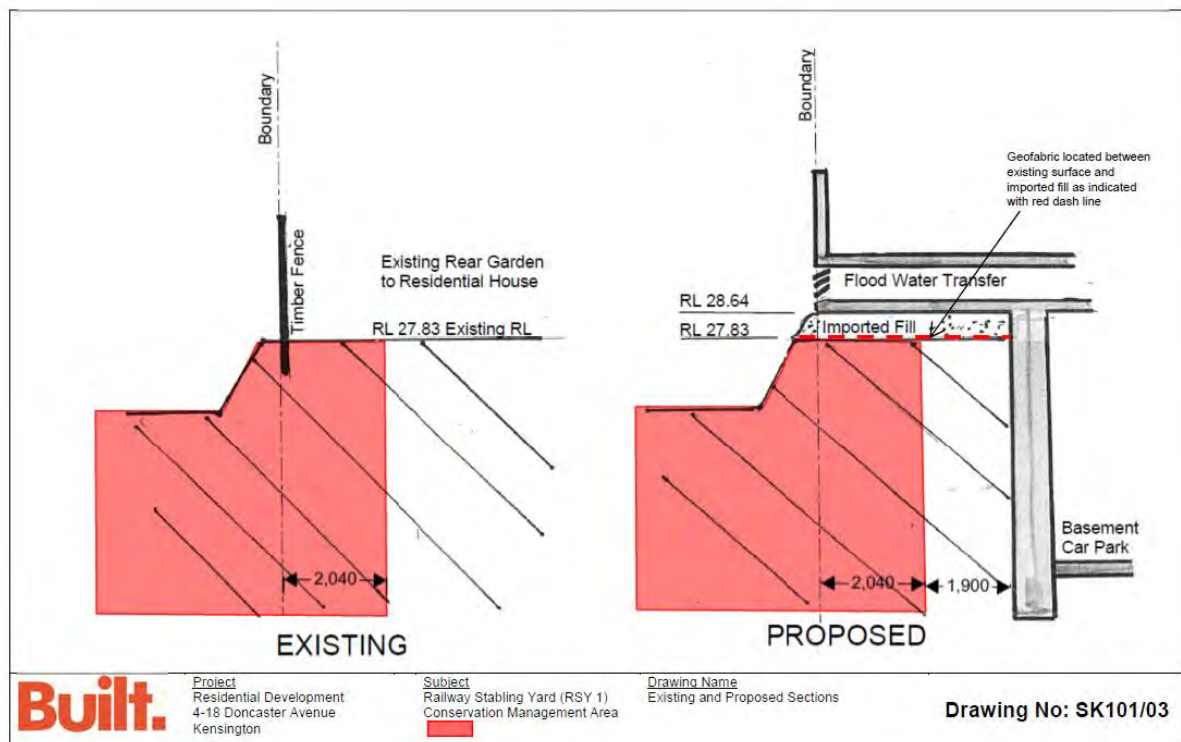


Figure 7.2 Schematic cross-section for the design of a culvert to be installed on top of the conservation management area. (Source: Built)

7.2 Strategy—Scientific Field Investigations

It is understood that Aboriginal objects may be disturbed by the proposed activity within the Doncaster Avenue PAD. The stratigraphic architecture of the substrate of the study area is also well understood because of excavations of RSY 1 in the adjacent property by GML Heritage in 2016. For those reasons, an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the NPW Act is sought to undertake all investigation works and any consequential archaeological salvage excavation. The AHIP would cover the whole development site, including the Doncaster Avenue PAD and RSY 1. The AHIP will allow for all archaeological and geomorphological works, the conservation works above RSY 1 and the ensuing development, as approved by Randwick City Council.

The methodology to be employed leading to and inclusive of salvage excavation is set out in the accompanying Archaeological Research Design (ARD) (Appendix E). Reference should be made to the ARD for all details regarding the scientific investigations conducted as part of the physical analysis of the study area.

The proposed activity will have the following staged procedure:

- Stage 1: Demolition and Monitoring;
- Stage 2: Geophysical and Geological Survey, and Archaeological Salvage Excavation; and
- Stage 3: Development (which includes conservation of RSY 1).

A synopsis of the stages is provided below.

7.2.1 Stage 1: Demolition and Monitoring

Complete demolition of the existing infrastructure at the study area may cause disturbance to the underlying intact sediment deposits. It is known that at the adjacent property to the southeast, which contained the larger portion of the archaeological site RSY 1, a layer of fill covered the intact sediment deposits beneath. It may be that the foundations of buildings only intersect that historical fill but this is as yet uncertain. During demolition of the existing infrastructure by Built, a representative from GML and from the Aboriginal community will monitor the proceedings. If the intact subsurface looks likely to be disturbed by any demolition it will immediately be stopped.

7.2.2 Stage 2: Geophysical and Geological Survey, and Archaeological Salvage Excavation

After demolition works are as complete as is possible without causing disturbance to the intact substrate, geophysical survey will be conducted over the study area wherever is accessible. A model of the subsurface stratigraphic architecture will be developed from the geophysical data. The stratigraphic model will be used to inform the placement of hand-operated borehole samples for confirmation and calibration of the stratigraphic model. The calibrated stratigraphic model will be used to inform the placement of exploratory excavation squares in areas where the substrate is interpreted as being intact. Recovery of cultural materials from the excavation squares will trigger immediate expansion of the square to salvage the cultural materials. Expansion will continue until an agreed threshold frequency value. The detailed methodology for the work is described in Appendix E.

7.2.3 Stage 3: Development

Following archaeological salvage, Built will construct a new three-storey residential building comprising 48 dwellings and a basement carpark for 71 vehicles. The existing heritage front portion of terraces at 10 and 12 Doncaster Avenue will be retained and refurbished. The site RSY 1 will be conserved in line with the details in Appendix D.

7.3 Strategy—Ongoing Community Consultation

Following the salvage excavation, the RAPs would continue to be consulted. Ongoing Aboriginal community consultation would also be required to identify and refine social and aesthetic values associated with the project area, and any values connected with the wider landscape identified through excavation. Those values would be integrated into the post-excavation report.

7.4 Strategy— Education and Interpretive Outcomes

The excavation process may yield further social value to the Aboriginal community for its potential to produce an educational and interpretive resource and may also be of interest to the general public.

Discussions with Built prior to excavation commencing should include the following:

- opportunities to interpret any evidence discovered during Aboriginal archaeological investigations at the site should be considered as part of a holistic approach to interpreting the site and may include public access to the archaeological program and development of an education program; and
- specific opportunities for, and methods of, interpretation of the Aboriginal heritage of the study area should be developed in consultation with the RAPs.

7.5 Endnotes

- ¹ Betteridge, K, Mackay, AD, Shepherd, TG, Barker, DJ, Budding, PJ, Devantier, BP et al. 1999, 'Effect of cattle and sheep treading on surface configuration of a sedimentary hill soil' in *Soil Research*, 37, pp 743–760.
- ² Sparks, DL 2003, *Environmental Soil Chemistry*, 2nd edition, Academic Press, Amsterdam.

8.0 Conclusions and Recommendations

8.1 Conclusions

Based upon the finding of this report, the following heritage management recommendations are made:

- Archaeological investigations have identified that the study area contains one PAD, one registered site, and occurs within a much wider Aboriginal cultural landscape, which encompasses the local suburb and Centennial Park.
- The proposed activity at the study area will cause impact to the existing sites and under NSW legislation will require the issue of an Aboriginal Heritage Impact Permit (AHIP) for the activity to proceed.
- The registered artefact site (RSY1) will be conserved during and following work. The mode of conservation will require indirect impact to the site and thus requires an AHIP.
- The study area has the potential to contain Aboriginal objects within the area of PAD (Doncaster PAD). Identification of any objects and consequent harm requires an AHIP.
- The study area holds social value to the Aboriginal community because of its importance as a component of the Botany Sands ecology.
- The complex stratigraphic architecture of overlying historical fills and underlying dune system is not simple and will require inter-disciplinary methods for appropriate investigation.
- Extant development and overlying historical fills prevent the observation of Aboriginal objects at the current ground surface. Assessment of the potential archaeological deposits can only proceed using an appropriate program of invasive methods.
- The site is demonstrated to flood to a depth of 0.2m above current surface levels (observed during archaeological work within the RSY site in the Randwick Stabling Yards). The dune sands are unstable and prone to collapse once excavated below 0.2m (observed during all work within the RSY site in the Randwick Stabling Yards).
- The nature of the currently developed site, the potentially deep stratigraphy, the instability of the dune system and possibility for flooding, and some potential for contact period objects means that the OEH Code of Practice cannot be implemented at the study area.
- The combination of unstable dunes and potential for flooding means that once ground disturbance work commences, any excavation work must be completed in as short a period as possible.
- On this basis a single AHIP is sought for all works (demolition, geomorphological, archaeological and development) associated with the Doncaster PAD and RSY 1 site.

8.2 Recommendations

From the conclusions above it is recommended that:

- An intensive program of geophysical, geological, and archaeological procedures as outlined in the Archaeological Research Design (Appendix E) be implemented at the study area for the recovery and documentation of a representative sample of cultural materials and environmental evidences.
- Avoidance of harm to the conservation management area by appropriate design of an overlying culvert and cordoning-off the area during all construction works, excepting the placement of the culvert (Appendix D).
- An Aboriginal Heritage Management Plan is prepared in consultation with the RAPs, for the continuing protection of the conservation management area. This should contain details of the work undertaken (following the ARD in Appendix E), develop management requirements for any Aboriginal objects recovered and provide means for the public interpretation/dissemination of the work's outcomes and findings. The Aboriginal HMP can form a component of the post excavation analysis and reporting.
- This final report be provided to the RAPs within 14 days of the AHIP application being made to the OEH.

9.0 Appendices

Appendix A

Aboriginal Community Consultation Log

Appendix B

New AHIMS Site Cards

Appendix C

DA Application Drawings

Appendix D

Conservation Management Area Design Plans

Appendix E

Archaeological Research Design

Appendix A

Details of Aboriginal Consultation

Aboriginal Consultation Log—Doncaster Ave, Kensington ACHAR+ATR—17-0058+A

Stage 1—Notification of project proposal and registration of interest

Stage 1, Step 1—Compilation of a list of Aboriginal stakeholders

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
OEH region office	Ms Fran Scully Archaeologist Aboriginal Heritage and Planning Office of Environment and Heritage PO Box 668 PARRAMATTA NSW 2124	10/04/2017	24/04/2017	Fran on secondment, forwarded to the request to Sam Higgs and Samantha Gibbins. Sam Higgs replied via letter the list of stakeholders known to OEH that may have an interest in the project.	17-0058A-oeH-1a-2 17-0058A-oeH-1b-1
La Perouse Local Aboriginal Land Council (LPLALC)	Mr Chris Ingrey CEO La Perouse Local Aboriginal Land Council PO Box 365 MATRAVILLE NSW 2036	10/04/2017	NA	No response	17-0058A-lplalc-1a-1
Metropolitan Local Aboriginal Land Council (MLALC)	PO Box 1103 STRAWBERRY HILLS NSW 2012	10/04/2017	NA	No response	17-0058A-mplalc-1a-1
The Registrar, <i>Aboriginal Lands Right Act 1983</i>	The Registrar, Aboriginal Land Rights Act PO Box 112 GLEBE NSW 2037 Att: Ms Megan Mebberson	10/04/2017	13/04/2017	Suggested contacting La Perouse Aboriginal Land Council	17-0058A-rc-1a-1 17-0058A-rc-1b-1
National Native Title Tribunal (NNTT)	National Native Title Tribunal GPO Box 9973 SYDNEY 2000 Attention: Ms Kimberley Wilson	10/04/2017	10/04/2017	No groups identified	17-0058A-nntt-1a-1 17-0058A-nntt-1b-1

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
Native Title Services Corporation (NTSCORP Limited)	Native Title Services Corporation PO Box 2105 STRAWBERRY HILLS NSW 2012 Attention: Mr Warren Mundine	10/04/2017	NA	No response	17-0058A-ntsc-1a-1
Randwick Local Council	Randwick City Council Administration Building & Customer Service Centre 30 Frances Street Randwick NSW 2031. council@randwick.nsw.gov.au	10/04/2017	12/04/2017	Suggested contacting La Perouse Aboriginal Land Council	17-0058A-rcc-1a-1 17-0058A-rcc-1b-1
Catchment Management Authority (CMA)	Greater Sydney Catchment Management Authority Parramatta Local Land Services Office PO Box W274, Parramatta Westfield NSW 2150	10/04/2017	13/04/2017	Suggested contacting the Office of Environment and Heritage (OEH)	17-0058A-cma-1a-1 17-0058A-cma-1b-1

Stage 1, Step 2—Newspaper Advert

Newspaper	Date Sent	Date Printed	Reference
Southern Courier	12/04/2017	18/04/2017	NewspaperNotice

On 12 April 2017, a printed newspaper advertisement was placed in the local press inviting Aboriginal groups to register for consultation. A period of 28 days was allowed for registration.

List of Aboriginal groups/people from Step 1 and Step 2.

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
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Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Deerubbin Local Aboriginal Land Council	Steve Randall (OEH says Kevin Cavanagh) (02) 4724 5600 PO Box 40 PENRITH BC, NSW 2751 srandall@deerubbin.org.au staff@deerubbin.org.au		OEH list of potential interested stakeholders.	17-0058A-dlalc-3a-1
	Kevin Cavanagh (02) 4724 5600 2/9 Tindale St, PENRITH, NSW 2750			
Tharawal Local Aboriginal Land Council	Denise Ezzy (02) 4681 0059 PO Box 168 PICTON, NSW 2571 ceo@tharawal.com.au reception@tharawal.com.au		OEH list of potential interested stakeholders.	17-0058A-tlalc-3a-1
Metropolitan Local Aboriginal Land Council	Nathan Moran (02) 8394 9666 PO Box 1103 STRAWBERRY HILLS, NSW 2016 nmoran@metrolalc.org.au admin@metrolalc.org.au		OEH list of potential interested stakeholders.	17-0058A-mlalc-3a-1
Gandangara Local Aboriginal Land Council	Kim Carriage (02) 9602 5280 PO Box 1038 LIVERPOOL, NSW 2170 gangangarra@gmail.com		OEH list of potential interested stakeholders.	17-0058A-glalc-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
La Perouse Local Aboriginal Land Council	Mr Chris Ingre CEO La Perouse Local Aboriginal Land Council PO Box 365 MATRAVILLE NSW 2036 CIngre@laperouse.org.au Please send all correspondence to Ash Walker AWalker@laperouse.org.au Also, CC in Ron Timbery RTimbery@laperouse.org.au	01/05/2017	OEH list of potential interested stakeholders & Randwick City Council email communication. Mr Ingre is on secondment and provided Mr Ashley Walkers details awalker@laperouse.org.au	17-0058A-llalc-3a-1 17-0058A-llalc-3a-2 17-0058A-llalc-3a-3
Parramatta City Council Aboriginal Advisory Committee	Maggie Kyle 0414 190 262 02 9806 5082 PO Box 32 PARRAMATTA, NSW 2124 mkyle@parracity.nsw.gov.au		OEH list of potential interested stakeholders.	17-0058A-pccaac-3a-1
Holroyd City Council Advisory Committee	Holroyd City Council (02) 9840 9840 PO Box 42 MERRYLANDS, NSW 2160		OEH list of potential interested stakeholders.	17-0058A-hccac-3a-1
Darug Custodian Aboriginal Corporation (DCAC)	Justine Coplin 02 4577 5181 04 1496 2766 PO Box 81 WINDSOR, NSW 2756 justinecoplin@optusnet.com.au	30/04/2017	OEH list of potential interested stakeholders.	17-0058A-dcac-3a-1
Darug Tribal Aboriginal Corporation (DTAC)	(Corina Marino) 02 9622 4081 PO Box 441 BLACKTOWN NSW 2148 Darug_tribal@live.com.au		OEH list of potential interested stakeholders.	17-0058A-dtac-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton (Celestine Everingham) 02 9410 3665 9/6 Chapman Ave CHATSWOOD, 2067 NSW	01/05/2017	OEH list of potential interested stakeholders.	17-0058A-dacha-3a-1
Darug Land Observations (DLO)	Gordon Workman (Jamie Workman) 0415 663 763 PO Box 571 PLUMPTON, NSW 2761 Gordow51@bigpond.net.au daruglandobservations@gmail.com	01/05/2017	OEH list of potential interested stakeholders.	17-0058A-dlo-3a-1
Des Dyer	Des Dyer 0408 360 814 18a Perigee Close DOONSIDE, NSW 2767 desmond4552@hotmail.com fields.r@outlook.com		OEH list of potential interested stakeholders.	17-0058A-dd-3a-1
Ken Foster	Ken Foster 0411-818 091 68 Australia Ave MATRAVILLE, NSW 2036		OEH list of potential interested stakeholders. The number provided was incorrect. Mail was returned to sender.	
La Perouse Botany Bay Corporation	Ms Yvonne Simms 0466 094 491 10 Murrong Place LA PEROUSE, NSW 2036 FAX: (02) 9311 3440 admin@laperouse.org.au		OEH list of potential interested stakeholders. .	17-0058A-lpbbsc-3a-1
Norma Simms	0466 094 491 10 Murrong Place LA PEROUSE, NSW 2036 02 466094491		OEH list of potential interested stakeholders.	17-0058A-lpbbsc-3a-1 17-0058A-lpbbsc-3a-2
Mathew and Andrew Coe	(08) 8344 2196 37 Derlanger Avenue, COLLINGSWOOD, SA 5081 accocoe2002@bigpond.com		OEH list of potential interested stakeholders.	17-0058A-mac-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Gundungurra Aboriginal Heritage Association Inc	Merl Williams 0247 573 223 PO Box 31 LAWSON, NSW 2783		OEH list of potential interested stakeholders.	17-0058A-gaha-3a-1
Gundungurra Tribal Council Aboriginal Corporation	Sharon Brown 02 4729 3713 PO Box 7244 LEURA, NSW 2780		OEH list of potential interested stakeholders. Number was disconnected at time of contact. Mail was returned to sender.	
Trevor Robinson	PO Box 73 PEAK HILL, NSW 2869		OEH list of potential interested stakeholders. Mail was returned to sender.	
Tania Mathews	0409 193 612 0267 924 038 U2 11 Walowa St NARRABI, NSW 2390 aboriginalhistoryhunter@gmail.com		OEH list of potential interested stakeholders.	17-0058A-tm-3a-1
A1 Indigenous Services	Carolyn Hickey 0411 650 057 73 Russell Street EMU PLAINS, NSW 2750 cazadirect@live.com	02/05/2017	OEH list of potential interested stakeholders.	Email
Cubbitch Barta	Glenda Chalker 0427 218 425 55 Nightingale Road PHEASANTS NEST, NSW 2574		OEH list of potential interested stakeholders.	17-0058A-cb-3a-1
	Rebecca Chalker 99 Menangle St PICTON, NSW 2571 Return to sender			
Eric Keidge	0431 166 423 11 Olsson Close HORNSBY HEIGHTS, NSW 2077		OEH list of potential interested stakeholders.	17-0058A-ec-3a-1
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise 0263 554 110 1 Bellevue Place PORTLAND, NSW 2847 cheriecarroll68@yahoo.com julieschroder5@live.com.au		OEH list of potential interested stakeholders.	17-0058A-gchac-3a-1 17-0058A-gchac-3a-2

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Merrigarn Indigenous Corporation	Shaun Carrol 0435 040 842 – number disconnected GPO Box 158 CANBERRA CITY, ACT 2601 – Return to sender		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	
Corroboree Aboriginal Corporation	Steve Johnson Marilyn Carroll Johnson (Director CDC) PO Box 3340 ROUSE HILL NSW 2155 corroboreecorp@bigpond.com	04/05/2017	OEH list of potential interested stakeholders.	17-0058A-cac-3A-1
Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson 0490 051 102 PO Box 246 SEVEN HILLS, NSW 2147 murrabidgeemullangari@yahoo.com.au		OEH list of potential interested stakeholders.	17-0058A-mbmac-3a-1 17-0058A-mbmac-3a-2
Muragadi Heritage Indigenous Corporation	Jesse Johnson 0447 970 049 – number disconnected 5 Hession Road NELSON, NSW 2765 – Return to sender		OEH list of potential interested stakeholders. Unable to contact organisation as details were outdated.	
Bidjawong Aboriginal Corporation	James Carrol 0433 224 324 PO Box 124 ROUND CORNER, NSW 2158		OEH list of potential interested stakeholders.	17-0058A-bac-3a-1
Phil Khan	0434 545 982 78 Forbes St EMU PLAINS, NSW 2750 Philipkhan.acn@live.com.au		OEH list of potential interested stakeholders.	17-0058A-pk-3a-1
Peter Falk Consultancy	Peter Falk 0401 938 060 kanga26@live.com.au		OEH list of potential interested stakeholders.	17-0058A-pfc-3a-1
	Duncan Falk eugoogleiser@hotmail.com			
Wurrumay Consultancy	Kerrie Slater 0423 935 556 89 Pyramid Street EMU PLAINS NSW 2750 Wurrumay@hotmail.com Vicki.slater@hotmail.com		OEH list of potential interested stakeholders.	17-0058A-wc-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Warragil Cultural Services	Aaron Slater 0481 280 067 warragil_c.s@hotmail.com		OEH list of potential interested stakeholders.	17-0058A-wcs-3a-1
Kawul Cultural Services	Vicky Slater (Manager) 0431 720 887 89 Pyramid Street EMU PLAINS NSW 2750 Vicki.slater@hotmail.com		OEH list of potential interested stakeholders.	17-0058A-kcs-3a-1
Tocomwall	Scott Franks and Danny Franks 0404 171 544 PO Box 76 CARINGBAH, NSW 1495 scott@tocomwall.com.au danny@tocomwall.com.au	01/05/2017	OEH list of potential interested stakeholders.	17-0058A-t-3a-1
D'Harawal Mens Aboriginal Corporation	Elwyn Brown 0401 920 982 187 Riverside Drive AIRDS, NSW 2560		OEH list of potential interested stakeholders.	17-0058A-dmac-3a-1
Amanda Hickey Cultural Services	Amanda Hickey 0434 480 588 73 Russell Street EMU PLAINS, NSW 2750 amandahickey@live.com.au	No registration communication was received from Amanda but Carolyn Hickey from A1 Indigenous services accepted our methodology on Amanda's behalf.	OEH list of potential interested stakeholders.	17-0058A-ahcs-3a-1
Widescope Indigenous Group	Steven and Donna Hickey 0425 230 693 73 Russell Street EMU PLAINS, NSW 2750 widescope.group@live.com	02/05/2017	OEH list of potential interested stakeholders.	17-0058A-wig-3a-1
HSB consultants	Patricia Hampton 0424 142 216 62 Ropes Crossing Boulevard ROPES CROSSING NSW 2760 Return to sender pamelaann@live.com.au		OEH list of potential interested stakeholders.	17-0058A-hsb-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Rane Consulting	Tony Williams 0288 246 991 1 Pyrenees Way BEAUMONT HILLS, NSW 2155 ajw08@tgg.com.au email bounced ajw1901@bigpond.com	31/04/2017	OEH list of potential interested stakeholders.	17-0058A-rc-3a-1 17-0058A-rc-3a-2
Andrew Williams	0456 399 687 Unit 2/ 24 Goodwin St NARRABEEN, NSW 2101 aas.info@bigpond.com andle81@bigpond.com	30/04/2017	OEH list of potential interested stakeholders.	Email
Dhinawan-Dhigaraa Culture & Heritage Pty Ltd	Ricky Fields 0402 942 572 19 Moomi Street LALOR PARK NSW 2147 dhinawan2@yahoo.com.au		OEH list of potential interested stakeholders.	17-0058A-ddchpl-3a-1 17-0058A-ddchpl-3a-2
	Athol Smith 0449 665 715 16 Yantara Place WOODCROFT 2767 NSW			
Gunyu	Darlene Hoskins-McKenzie and Kylie Ann Bell dghoskinsmckenzie@gmail.com gunyuuchts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-g-3a-1
Walbunja	Hika Te Kowhai 15 Renee Crescent MORUYA HEADS, NSW 2537 walbunja@gmail.com		OEH list of potential interested stakeholders.	17-0058A-w-3a-1
Badu	Karia Lea Bond 0476 381 207 11 Jeffery Place MORUYA NSW 2537 baduchts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-b-3a-1
Goobah Developments	Basil Smith 0405 995 725 66 Grantham Road BATEHAVEN NSW 2536 goobahchts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-gd-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Wullung	Lee-Roy James Boota 0403 703 942 54 Blackwood Street GERRINGONG, NSW 2534		OEH list of potential interested stakeholders.	17-0058A-w-3a-1
Yerramurra	Nicholas Wade Glover (OEH says Robert Parson) 0401 753 202 1 Waratah Avenue ALBION PARK RAIL, NSW 2547 yerramurra@gmail.com		OEH list of potential interested stakeholders.	
Nundagurri	Aaron Broad (OEH says Newton Carriage) 0402 526 888 6a Isabella Place KIAMA, NSW 2533 nundagurri@gmail.com		OEH list of potential interested stakeholders.	17-0058A-n-3a-1
Murrumbul	Mark Henry murrumbul@gmail.com		OEH list of potential interested stakeholders.	17-0058A-m-3a-1
Jerringong	Joanne Anne Stewart Joanne Stewart 2/10 Burnett Avenue GERRINGONG, NSW 2534 jerringong@gmail.com		OEH list of potential interested stakeholders.	17-0058A-j-3a-1
Pemulwuy CHTS	Pemulwuy Johnson 0425 066 100 14 Top Place MOUNT ANNAN, NSW 2567 pemulwuyd@gmail.com drb2nv@hotmail.com		OEH list of potential interested stakeholders.	17-0058A-pchts-3a-1
Bilinga	Christopher Payne (OEH says Simalene Carriage) bilingachts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-bcp-3a-1
Munyunga	Peter Foster (OEH says Kaya Dawn Bell) munyangachts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-mpfc-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Wingikara	Hayley Bell (OEH says David Bell) wingikara@gmail.com wingikarachts@gmail.com email bounced		OEH list of potential interested stakeholders.	17-0058A-whb-3a-1
Minnamunnung	Aaron Broad 0402 526 888 1 Waratah Avenue ALBION PARK RAIL NSW 2547		OEH list of potential interested stakeholders.	17-0058A-m-3a-1
Gundungurra Tribal Technical Services	Peter Foster 0432 590 289 4 Tuppal Way AIRDS, NSW 2560 gundungurratectribsevice@gmail.com		OEH list of potential interested stakeholders.	17-0058A-gtts-3a-1
	(OEH says Christopher Payne) 0466 975 437 9/15/22 Burns Road LEUMEAH, NSW 2560 Chrispayne776@gmail.com			
Walgalu	Ronald Stewart walgaluchts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-wrs-3a-1
Thauaira	Shane Carriage thauairachts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-tsc-3a-1
Dharug	Andrew Bond dharugchts@gmail.com		OEH list of potential interested stakeholders.	17-0058A-dab-3a-1
Bilinga Cultural Heritage Technical Services	Robert Brown Email Bounced bilinga@mirramajah.com		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	17-0058A-bchts-3a-1
Gunyuu Cultural Heritage Technical Services	Darlene Hoskins-McKenzie Both emails bounced gunyuu@mirramajah.com management@mirramajah.com		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	17-0058A-gchts-3a-1
Munyinga Cultural Heritage Technical Services	Suzannah McKenzie munyinga@mirramajah.com Email Bounced		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	17-0058A-mchts-3a-2
Murrumbul Cultural Heritage Technical Services	Levi McKenzie-Kirkbright murrumbul@mirramajah.com Email Bounced		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	17-0058A-mchtslmk-3a-1

Aboriginal Organisation/Person	Contact	Date Registered	How the name was obtained and any comments	Reference
Wingikara Cultural Heritage Technical Service	Wandai Kirkbright wingikara@mirramajah.com Email Bounced		OEH list of potential interested stakeholders. Unable to contact organisation as email details were outdated.	17-0758A-wchts-3a-1
Gulaga	Wendy Smith gulagachts@gmail.com	10/05/2017	OEH list of potential interested stakeholders.	17-0058A-gws-3a-1
Biamanga	Seli Storer biamangachts@gmail.com	10/05/2017	OEH list of potential interested stakeholders.	17-0058A-bss-3a-1
Callendulla	Corey Smith cullendullachts@gmail.com	10/05/2017	OEH list of potential interested stakeholders.	17-0058A-ccs-3a-1
Murramarang	Roxanne Smith murramarangchts@gmail.com	10/05/2017	OEH list of potential interested stakeholders.	17-0058A-mrs-3a-1
DJMD Consultancy	Darren Duncan 0410 510 397 darrenjohnduncan@gmail.com		OEH list of potential interested stakeholders.	17-0058A-djmdcc-3a-1
Butucarbin Aboriginal Corporation	Jennifer Beale 0298 327 167 PO Box E18 EMERTON, NSW 2770 koori@ozemail.com.au		OEH list of potential interested stakeholders.	17-0058A-bac-3a-1 17-0058A-bac-3a-2
Didge Ngunawal Clan	Lillylea Carroll Paul Boyd 0426 823 944 7 Siskin St QUAKERS HILL, NSW 2763 didgegunawal@yahoo.com -email is incorrect	02/05/2017	OEH list of potential interested stakeholders. Email Bounced, letter sent.	17-0058A-dnc-3a-1 17-0058A-dnc-3a-2
Ginninderra Aboriginal Corporation	Steve Johnson and Krystle Carroll 0406 991 221 1 Smallwood Road MCGRATHS HILL, NSW 2756 Ginninderra.corp@gmail.com		OEH list of potential interested stakeholders.	17-0058A-gac-3a-1
Garrara Aboriginal Corporation	Raymond Ingre raymond@bariyu.org.au		OEH list of potential interested stakeholders.	17-0058A-gacri-3a-1
Nerrigundah	Newton Carriage 0421 253 677		OEH list of potential interested stakeholders. Supplied email bounced. 02/05/2017 Called Mr Carriage asking for a current email.	17-0058A-dlo-3a-1

Stage 1, Step 3—Aboriginal notification of the proposed project and an offer to be involved in the consultation

Following Stage 1, Steps 1 and 2, the following list of people and organisations were identified. On 28 April 2017, all persons/groups were sent written and/or email correspondence inviting them to register an interest in the project. An initial period of 14 days was allowed for registration (12 May 2017). The date was extended to 16 May 2017 to allow for some email bounce-backs.

Aboriginal Organisation/Person	Contact	Date Sent	Reference
Deerubbin Local Aboriginal Land Council	Steve Randall	28/04/2017	17-0058dlalcc1
Tharawal Local Aboriginal Land Council	Denise Ezzy	28/04/2017	17-0058tlalcc1
Metropolitan Local Aboriginal Land Council	Nathan Moran	28/04/2017	17-0058mlalcc1
Gandangara Local Aboriginal Land Council	Kim Carriage	28/04/2017	17-0058glalcc1
La Perouse Local Aboriginal Land Council	Mr Chris Ingrey	28/04/2017	17-0058lplalcc1
Parramatta City Council Aboriginal Advisory Committee	Maggie Kyle	28/04/2017	17-0058pccaacc1
Holroyd City Council Advisory Committee	Holroyd City Council	28/04/2017	17-0058hccacc1
Darug Custodian Aboriginal Corporation (DCAC)	Justine Coplin	28/04/2017	17-0058dcacc1
Darug Tribal Aboriginal Corporation (DTAC)	Corina Marino	28/04/2017	17-0058dtacc1
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton and Celestine Everingham	28/04/2017	17-0058dachac1
Darug Land Observations (DLO)	Gordon Workman	28/04/2017	17-0058dlloc1
Des Dyer	Des Dyer and Ricky Fields	28/04/2017	17-0058ddc1
Ken Foster	Ken Foster		
La Perouse Botany Bay Corporation	Ms Yvonne Simms	28/04/2017	17-0058lpbbcc1
Norma Simms		28/04/2017	17-0058nsc1
Mathew and Andrew Coe		28/04/2017	17-0058macc1
Gundungurra Aboriginal Heritage Association Inc	Merl Williams	28/04/2017	17-0058gahac1
Gundungurra Tribal Council Aboriginal Corporation	Sharon Brown		
Trevor Robinson			
Tania Mathews		28/04/2017	17-0058tmc1
A1 Indigenous Services	Carolyn Hickey	28/04/2017	17-0058a1isc1
Cubbitch Barta	Glenda Chalker	28/04/2017	17-0058cbc1
	Rebecca Chalker	28/04/2017	17-0058cbc2
Eric Keidge		28/04/2017	17-0058ecc1
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	28/04/2017	17-0058gchacc1
Merrigarn Indigenous Corporation	Shaun Carrol		

Aboriginal Organisation/Person	Contact	Date Sent	Reference
Corroboree Aboriginal Corporation	Steve Johnson Marilyn Carroll Johnson (Director CDC)	28/04/2017	17-0058cacc1
Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	28/04/2017	17-0058mbmacc1
Muragadi Heritage Indigenous Corporation	Jesse Johnson		
Bidjawong Aboriginal Corporation	James Carrol	28/04/2017	17-0058bacc1
Phil Khan		28/04/2017	17-0058pkc1
Peter Falk Consultancy	Peter Falk	28/04/2017	17-0058pfcc1
	Duncan Falk		
Wurrumay Consultancy	Kerrie Slater	28/04/2017	17-0058wcc1
Warragil Cultural Services	Aaron Slater	28/04/2017	17-0058wcsc1
Kawul Cultural Services	Vicky Slater	28/04/2017	17-0058kcsc1
Tocomwall	Scott Franks	28/04/2017	17-0058tc1
D'Harawal Mens Aboriginal Corporation	Elwyn Brown	28/04/2017	17-0058dmacc1
Amanda Hickey Cultural Services	Amanda Hickey	28/04/2017	17-0058ahcsc1
Widescope Indigenous Group	Steven and Donna Hickey	28/04/2017	17-0058wlgc1
HSB consultants	Patricia Hampton	28/04/2017	17-0058hsbc1
Rane Consulting	Tony Williams	28/04/2017	17-0058rcc1
AAS	Andrew Williams	28/04/2017	17-0058awc1
Dhinawan-Dhigaraa Culture & Heritage Pty Ltd	Ricky Fields	28/04/2017	17-0058ddchplc1
	Athol Smith	28/04/2017	17-0058ddchc1
Gunyyu	Darlene Hoskins-McKenzie and Kylie Ann Bell	28/04/2017	17-0058gc1
Walbunja	Hika Te Kowhai	28/04/2017	17-0058wc1
Badu	Karia Lea Bond	28/04/2017	17-0058bc1
Goobah Developments	Basil Smith	28/04/2017	17-0058gdc1
Wullung	Lee-Roy James Boota	28/04/2017	17-0058wc1
Yerramurra	Nicholas Wade Glover (OEH says Robert Parson)	28/04/2017	17-0058yc1
Nundagurri	Aaron Broad (OEH says Newton Carriage)	28/04/2017	17-0058nc1
Murrumbul	Mark Henry	28/04/2017	17-0058mc1
Jerringong	Joanne Stewart	28/04/2017	17-0058jc1
Pemulwuy CHTS	Pemulwuy Johnson	28/04/2017	17-0058pchtsc1
Bilinga	Christopher Payne (OEH says Simalene Carriage)	28/04/2017	17-0058bc1
Munyunga	Peter Foster (OEH says Kaya Dawn Bell)	28/04/2017	17-0058mpfc1

Aboriginal Organisation/Person	Contact	Date Sent	Reference
Wingikara	Hayley Bell (OEH says David Bell)	28/04/2017	17-0058whbc1
Minnamunnung	Aaron Broad	28/04/2017	17-0058mc1
Gundungurra Tribal Technical Services	Peter Foster	28/04/2017	17-0058gttsc1
Walgalu	Ronald Stewart	28/04/2017	17-0058wrsc1
Thauaira	Shane Carriage	28/04/2017	17-0058tscc1
Dharug	Andrew Bond	28/04/2017	17-0058dabc1
Bilinga Cultural Heritage Technical Services	Robert Brown	28/04/2017	17-0058bchtsc1
Gunyyu Cultural Heritage Technical Services	Darlene Hoskins-McKenzie	28/04/2017	17-0058gchtsc1
Munyunga Cultural Heritage Technical Services	Suzannah McKenzie	28/04/2017	17-0058mchtsc1
Murrumbul Cultural Heritage Technical Services	Levi McKenzie-Kirkbright	28/04/2017	17-0058mchtslmkc1
Wingikara Cultural Heritage Technical Service	Wandai Kirkbright	28/04/2017	17-0058wchtsc1
Gulaga	Wendy Smith	28/04/2017	17-0058gwsc1
Biamanga	Seli Storer	28/04/2017	17-0058bssc1
Callendulla	Corey Smith	28/04/2017	17-0058ccsc1
Murramarang	Roxanne Smith	28/04/2017	17-0058mrsc1
DJMD Consultancy	Darren Duncan	28/04/2017	17-0058djmdc1
Butucarbin Aboriginal Corporation	Jennifer Beale	28/04/2017	17-0058bacc1
Didge Ngunawal Clan	Lillylea Carroll and Paul Boyd	28/04/2017	17-0058dncc1
Ginninderra Aboriginal Corporation	Steve Johnson and Krystle Carroll	28/04/2017	17-0058gacc1
Garrara Aboriginal Corporation	Raymond Ingrey	28/04/2017	17-0058gacric1
Nerrigundah	Newton Carriage	28/04/2017	17-0058nncc1

Stage 1 Complete—Registered Aboriginal Parties (RAP) Contact Details

A total of 15 groups/individuals registered for Aboriginal consultation.

Aboriginal Organisation/Person	Contact	Date Received and comments	Reference
Darug Custodian Aboriginal Corporation (DCAC)	Justine Coplin justinecoplin@optusnet.com.au	30/04/2017 Our group is a non- profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history. The Randwick area is an area that our group has a vast knowledge of, we have worked and lived in for many years, this area is significant to the Darug people due to the connection of sites and the continued occupation. Our group has been involved in all previous assessments and works in this area as a traditional owner Darug group for the past 40 plus years. Therefore we would like to register our interest for full consultation and involvement in this above project area. Please contact us with all further enquiries on the above contacts.	17-0058A-dcac-3b-1
Aboriginal Archaeology Service Inc (AAS)	Andrew Williams AAS.info@bigpond.com andle81@bigpond.com	30/04/2017 Aboriginal Archaeology Service is seeking primary involvement in all consultation meetings and fieldwork for the above-mentioned project. AAS immediate family has lived in the area from 1897 and retains local and oral history on behalf of its first nation people. We have no objection to our information being provided to the Office of Environment and Heritage and the Local Aboriginal Land Council. AAS can assist with input that can be incorporated into a written assessment of cultural values of the area. We are also able to provide fit staff to assist with work that may involve physical labour. We can provide our schedule of rates and copies of relevant certificates of currency for business insurances on request. All correspondence should be emailed to AAS.info@bigpond.com and andle81@bigpond.com or to the above postal address. The area is an important part of our culture and valued by our family.	17-0058A-aas-3b-1
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton and Celestine Everingham 02 9410 3665 9/6 Chapman Ave CHATSWOOD, 2067 NSW	01/05/2017 Yes we would like to be involved in the consultation	Phone

Aboriginal Organisation/Person	Contact	Date Received and comments	Reference
Darug Land Observations (DLO)	Gordon Workman Gordow51@bigpond.net.au daruglandobservations@gmail.com	Please be advice that D.L.O is seeking to be involved in any and all consultation meetings and field work. This office specializes in Aboriginal and community consultation. An has a membership that comprises of Traditional owners from the area in question those retain strong story and song lines and oral history and continued contact. We would also like to state that we do not except or support any person or organization that are NOT from the DARUG Nation that comments regarding the said area. Please also be advised that this aboriginal Organization does not do volunteer work or attend unpaid meetings. I hope that you advise your client of this so that, This Group will not be discriminated against and refused paid field work. All Correspondence should be emailed to the following darudlandobservations@gmail.com	17-0058A-dlo-3b-1
La Perouse Local Aboriginal Land Council	Ron Timbery RTimbery@laperouse.org.au Mr Ashley Walker awalker@laperouse.org.au	I would like to register for the community consultation to be undertaken in relation to this project.	17-0058A-lplalc-3b-1 17-0058A-lplalc-3b-2
A1 Indigenous Services	Carolyn Hickey cazadirect@live.com	A1 would like to register for consultation and an field work for this project, I hold cultural knowledge of this area.	17-0058A-a1-3b-1
Widescope Indigenous Group	Steven Hickey widescope.group@live.com	WIG would like to register for consultation and an field work for this project, I hold cultural knowledge of this area.	17-0058A-w-3b-1
Rane Aboriginal Heritage Consultants	Tony Williams ajw1901@bigpond.com	Rane Aboriginal Heritage Consultants is seeking primary involvement in all consultation meetings and fieldwork for the above-mentioned project. RAHC immediate family has lived in the area from 1897 and retains local and oral history on behalf of its first nation people. We have no objection to our information being provided to the Office of Environment and Heritage and the Local Aboriginal Land Council.	17-0058A-rc-3b-1
Tocomwall	Jennifer Norfolk jennifer@tocomwall.com.au	Tocomwall respectfully requests primary involvement in all consultation meetings and fieldwork associated with the project.	17-0058A-t-3b-1
Didge Ngunawal Clan	Lilly Carroll didgengunawalclan@yahoo.com.au	Didge Ngunawal Clan would like to register and interest into Re: 4-18 Doncaster Avenue Randwick	17-0058A-dnc-3b-1

Aboriginal Organisation/Person	Contact	Date Received and comments	Reference
Corroboree Aboriginal Corporation	Marilyn Carrol-Johnson corroboreecorp@bigpond.com	We are pleased to be considered to consult in Aboriginal Registration for Community Consultation— Doncaster Avenue Project.	17-0058A-cac-3b-1
Biamanga	Seli Storer biamangachts@gmail.com	Please accept this as Biamangas expression of interest to register for the above project and be kept informed of any further developments thankyou	17-0058A-b-3b-1
Cullendulla	Corey Smith cullendullachts@gmail.com	Please accept this as Cullendullas expression of interest to register for the above project and we wish to be kept informed of any further developments thankyou	17-0058A-c-3b-1
Gulaga	Wendy Smith gulagachts@gmail.com	This is Gulagas expression of interest to register for the above project and we wish to be kept informed about any further developments thankyou	17-0058A-g-3b-1
Murramarang	Roxanne Smith murramarangchts@gmail.com	Please accept this as Murramarangs expression of interest to register for the above project and we wish to be kept informed of any further developments thankyou	17-0058A-m-3b-1

On 29 May 2017 a list of the RAPs was provided to the OEH and the LALC.

Stages 2 and 3—Presentation of information about the proposed project and Gathering Information About Cultural Significance

Stages 2, Step 1—Presentation of proposed project information and provision of proposed assessment methodology to the RAPs

Stage 3, Step 3—Seek information from RAP on (a) the presence of Aboriginal objects of cultural value and (b) places of cultural value

On 22 May 2017, the RAPs were provided with project information, the proposed assessment methodology and requested to provide information relating to known Aboriginal objects and or places of cultural value, connected with the study area. A period of 28 days was provided for review and comments (19 June 2017). The following comments were received.

Aboriginal Organisation/Person	Date Sent	Date Reply	Comments, outcomes and/or issues	Reference
Darug Aboriginal Cultural Heritage Assessments	22/05/2017	29/05/2017	Celestine Everingham advised by phone that she accepts our methodology	17-0058A-dacha-1a-1
A1 Indigenous Services	22/05/2017	22/05/2017	A1, AHCS and Widescope agree with the Methodology for 4-18 Doncaster Avenue Provision, Project created by GML Heritage.	17-0058A-a1-1a-1 17-0058A-a1-1a-2

Aboriginal Organisation/Person	Date Sent	Date Reply	Comments, outcomes and/or issues	Reference
Aboriginal Archaeology Service Inc (AAS)	22/05/2017	23/05/2017	Aboriginal Archaeology Service agree with the above proposed Assessment Methodology.	17-0058A-aw-1a-1 17-0058A-aw-1a-2
Biamanga	22/05/2017		None	17-0058A-b-1a-1 17-0058A-b-1a-2
Cullendulla	22/05/2017		None	17-0058A-c-1a-1 17-0058A-c-1a-2
Corroboree Aboriginal Corporation	22/05/2017	01/06/2017	We see no issues with methodology provided to Corroboree Aboriginal Corporation	17-0058A-cac-1a-1 17-0058A-cac-1a-2
Darug Custodian Aboriginal Corporation (DCAC)	22/05/2017	23/05/2017	We support the recommendations set out in this report.	17-0058A-dcac-1a-1
Darug Land Observations (DLO)	22/05/2017	02/06/2017	Darug Land Observations Pty Ltd has reviewed the archaeological and cultural heritage assessment and supports the methodology for the proposed demolition of the existing building and construction of a new three-storey residential flat building at 4-18 Doncaster Avenue, in Kensington. In relation to the long-term storage of recovered artefacts, if any, Darug Land Observations Pty Ltd strongly believes that the recovered artefacts should be re-buried on Country (the study area).	17-0058A-dlo-1a-1 17-0058A-dlo-1a-2
Gulaga	22/05/2017		None	17-0058A-g-1a-1 17-0058A-g-1a-2
La Perouse Local Aboriginal Land Council	22/05/2017		The La Perouse LALC generally supports the proposed methodology outlined in the document, Reference 17-0058pb1, compiled by GML Heritage and dated 22 May 2017.	17-0058A-lalc-1a-1 17-0058A-lalc-1a-3 17-0058A-lalc-1a-4
Murramarang	22/05/2017		None	17-0058A-m-1a-1 17-0058A-m-1a-2
Rane Aboriginal Heritage Consultants	22/05/2017		None	17-0058A-rc-1a-1 17-0058A-rc-1a-2
Tocomwall	22/05/2017		None	17-0058A-to-1a-1 17-0058A-to-1a-2 17-0058A-to-1a-3

Aboriginal Organisation/Person	Date Sent	Date Reply	Comments, outcomes and/or issues	Reference
Widescope Indigenous Group	22/05/2017	26/05/2017	I have been sent information Re: 4–18 Doncaster Avenue project I agree and seek to endorse the project methodology.	17-0058A-wg-1a-1 17-0058A-wg-1a-2
Didge Ngunawal Clan	22/05/2017	24/05/2017	DNC would just like to know what is gonna happen to the artefacts once they are found if they're being reburied, for educational use or in a museum. DNC agrees on the methodology at 4 to 18 Doncaster Avenue	17-0058A-dnc-1a-1

Stage 4—Review of the draft ACHAR

Stage 4—Review of draft cultural heritage assessment report

The draft ACHAR (this report) was provided to the RAPS on 25 July 2017. A period of 28 days was allowed for their comments (18 August 2017). Following 18 August 2017, until the production of the ACHAR, no further comments have been received.

All RAPs agreed with the proposed project methodology. The LALC provided further comments; in response, GML note that the portion of site RSY 1 will be conserved during the development work. As far as GML is aware, the Light Rail stabling yards will not encroach into the Doncaster site study area. There is a potential for further Aboriginal objects to be located within the Doncaster PAD area; this has been the subject of this report and its intended management.

RAP	Date Sent	Date Reply	Comments and/or cultural values identified	Reference
Darug Aboriginal Cultural Heritage Assessments	25/07/2017	11/08/2017	Agree with the ACHAR	17-0058A-dacha-1b-1
A1 Indigenous Services	25/07/2017	21/08/2017	A1 and AHCS support the Methodology and Aboriginal Cultural Heritage Assessment Report created by GML Heritage	17-0058A-a1-1b-1
Aboriginal Archaeology Service Inc (AAS)	25/07/2017	27/07/2017	Aboriginal Archaeology Service agree with the above proposed Assessment Methodology.	17-0058A-aas-1b-1
Biamanga	25/07/2017	None	None	
Cullendulla	25/07/2017	None	None	
Corroboree Aboriginal Corporation	25/07/2017	None	None	
Darug Custodian Aboriginal Corporation (DCAC)	25/07/2017	30/07/2017	Aboriginal Archaeology Service agree with the above proposed Assessment Methodology.	17-0058A-dcac-1b-1
Darug Land Observations (DLO)	25/07/2017	None	None	

RAP	Date Sent	Date Reply	Comments and/or cultural values identified	Reference
Gulaga	25/07/2017	01/08/2017	Gulaga agrees with/accepts the report for Doncaster Ave, Kensington	17-0058A-g-1b-1
La Perouse Local Aboriginal Land Council	25/07/2017	18/08/2017	The La Perouse LALC is very concerned about the close proximity of the proposed development at 4-18 Doncaster Avenue, Kensington, to the recorded Aboriginal site at the Randwick Stabling Yards, and the potential impacts upon the site arising from the development. The La Perouse LALC is also concerned that the Randwick Stabling Yards site may extend into the proposed development area, or that there is potential for other Aboriginal objects to be found during excavation of the proposed development. The La Perouse LALC is generally supportive of the report's conclusions and recommendations, and of the measures that are outlined in the Archaeological Technical Report (Appendix E).	17-0058A-lplalc-1b-1
Murramarang	25/07/2017	None	None	
Rane Aboriginal Heritage Consultants	25/07/2017	None	None	
Tocomwall	25/07/2017	None	None	
Widescope Indigenous Group	25/07/2017	None	None	
Didge Ngunawal Clan	25/07/2017	None	None	

Appendix B

New AHIMS Site Cards'

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 45-6-3245

Date recorded: 11-04-2017

Site Location Information

Site name: Doncaster Ave PAD

Easting: 336037 Northing: 6246916 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 0

Zone: 56 Location method: Client GIS or CAD system

Recorder Information

(The person responsible for the completion and submission of this form)

Title Surname First name
Dr. Owen Tim

Organisation: GML

Address: Level 6, 372 Elizabeth Street, Surry Hills, NSW

Phone: 0404233789 E-mail: timo@gml.com.au

Site Context Information

Land Form Pattern: Coastal Plain Land Use: Established Urban

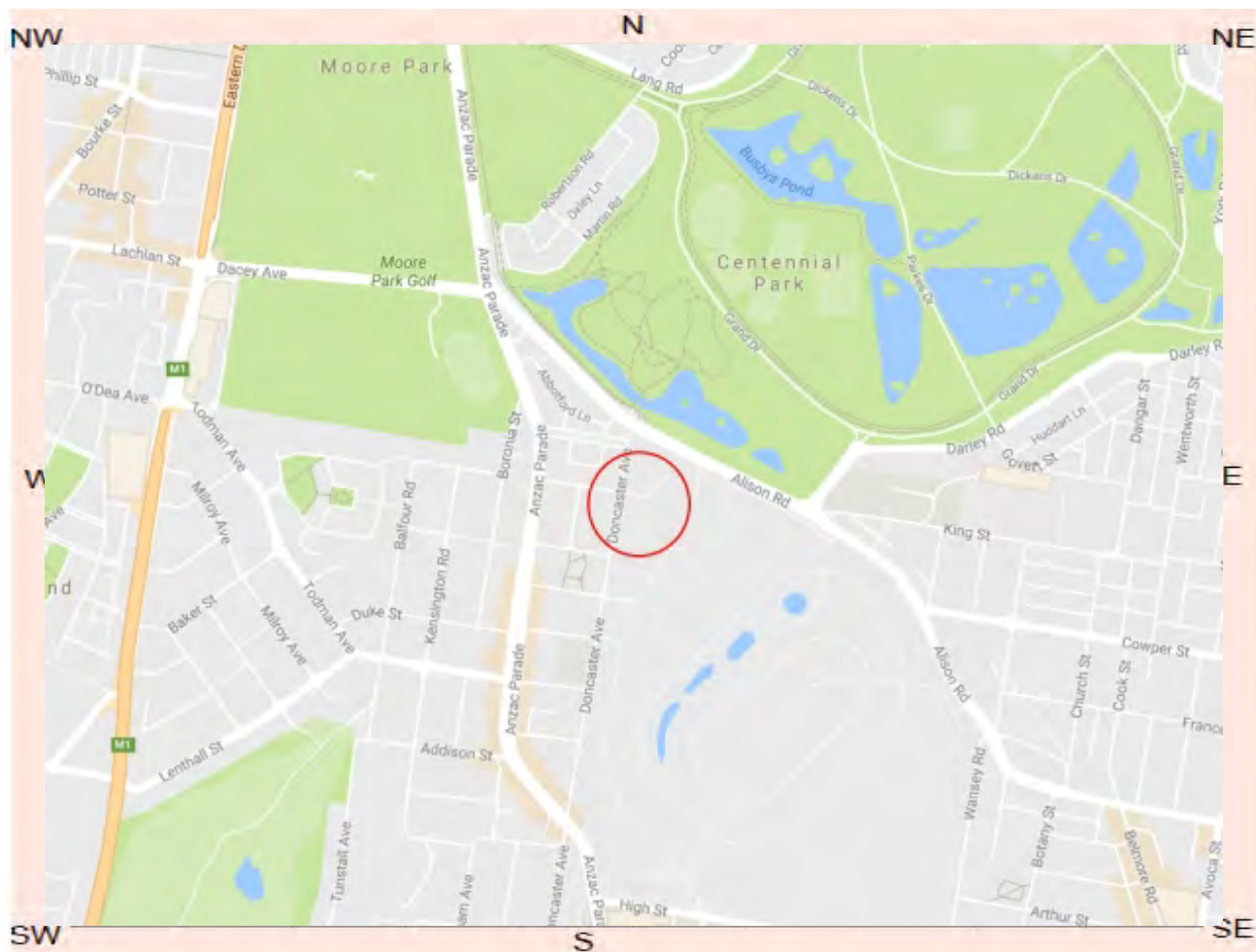
Land Form Unit: Dune Vegetation: Cleared

Distance to Water (m): 0 Primary Report: In preparation

How to get to the site: Corner of Alison Road and Doncaster Ave, covering 4-18 Doncaster Ave, Randwick

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
1. Potential Archaeological Deposit		90	40

Description:

PAD for Aboriginal objects located within the remnant sand dune, adjacent (west) to RSY 1

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
2.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
3.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
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Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
4.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
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Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
5.			

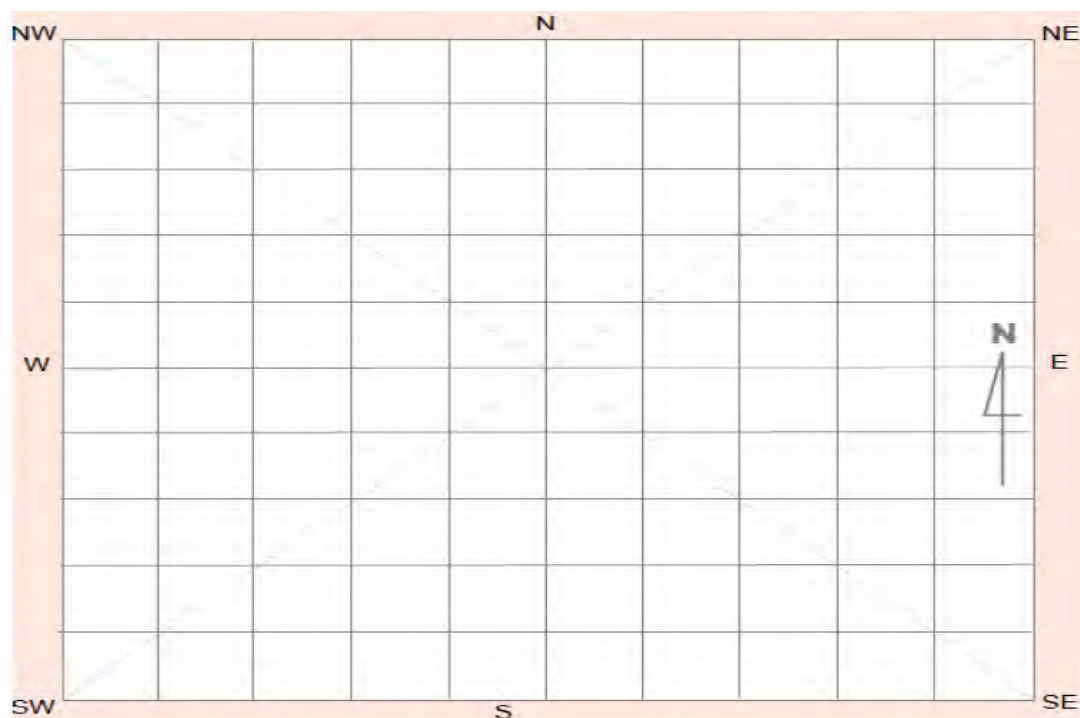
Description:

Scarred Trees

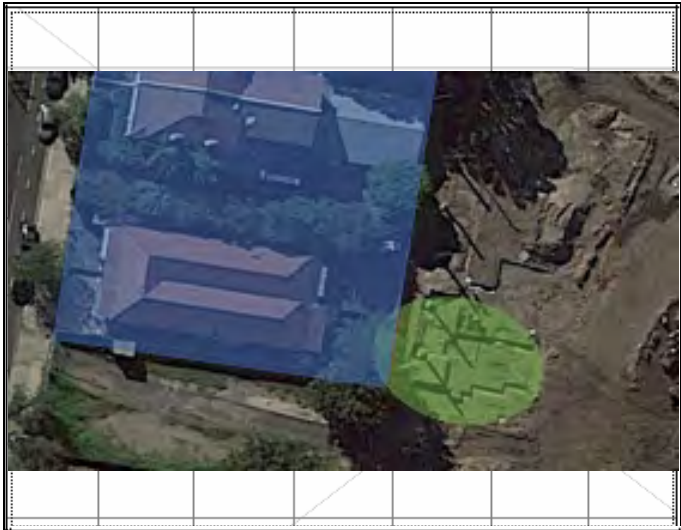
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
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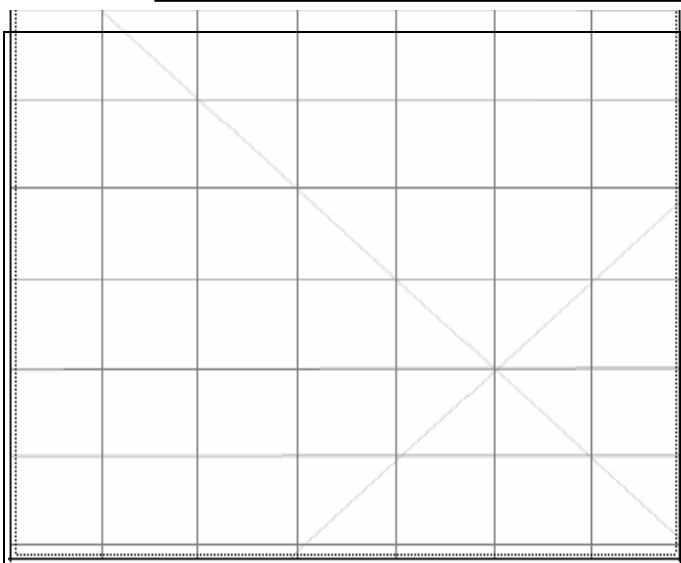
Other Site Info:

Site plan

Site photographs



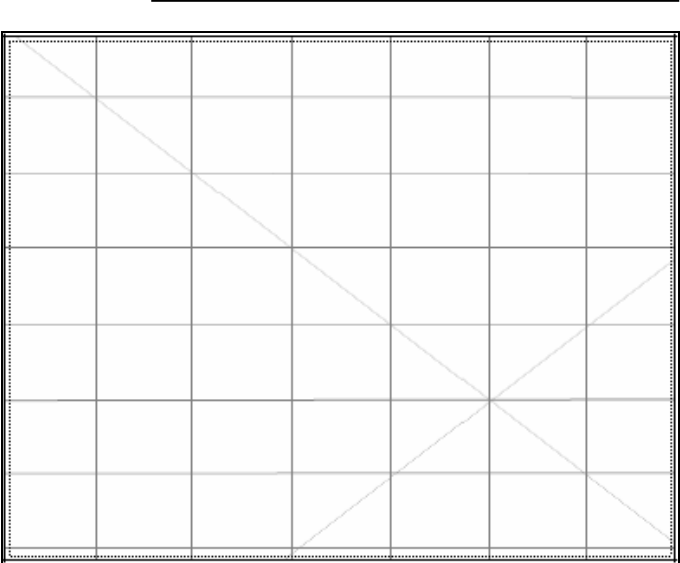
Description: Showing the connection between Doncaster Ave PAD and RSY 1



Description:



Description: The extent of Doncaster Ave PAD



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type:

Gender

General ☒

Location ☐

Why is this site restricted?:

The area is subject to assessment and covered by the confidentiality agreements associated with RSY 1

Further information contact

Title

Surname

First name

Organisation:

Address:

Phone:

E-mail:

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 45-6-3246

Date recorded: 11-04-2017

Site Location Information

Site name: RSY 1

Easting: 336060 Northing: 6242862 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 0

Zone: 56 Location method: Client GIS or CAD system

Recorder Information

(The person responsible for the completion and submission of this form)

Title Surname First name
Dr. Owen Tim

Organisation: GML

Address: Level 6, 372 Elizabeth Street, Surry Hills, NSW

Phone: 0404233789 E-mail: timo@gml.com.au

Site Context Information

Land Form Pattern: Coastal Plain Land Use: Transport Corridor

Land Form Unit: Dune Vegetation: Cleared

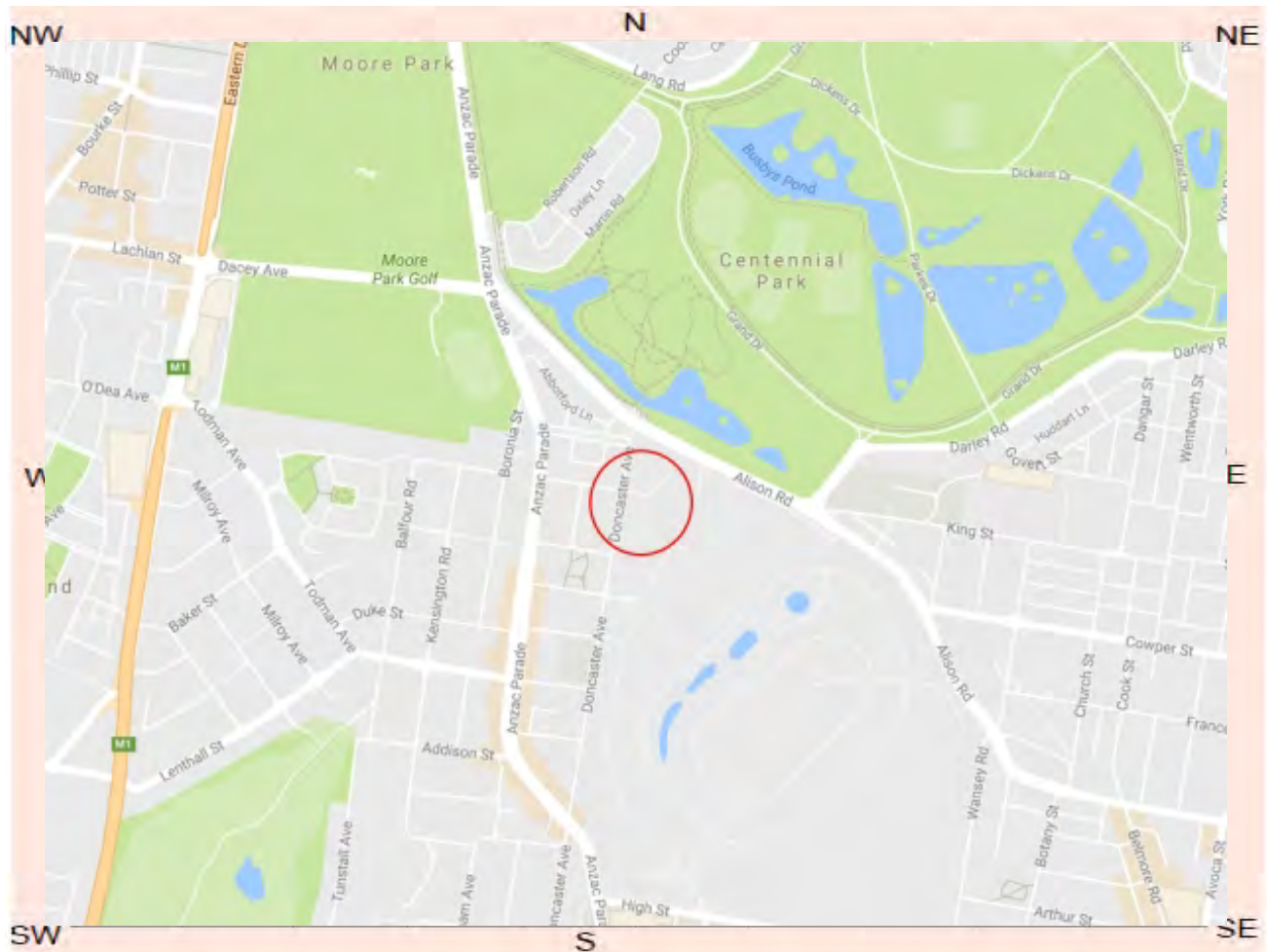
Distance to Water (m): 80 Primary Report: GML Heritage - currently confidential

How to get to the site: Corner of Alison Road and Doncaster Avenue, Randwick

Other site information:

The site has been archaeologically excavated within the TfNSW owned property (east). A small portion of the site extends (presumably) intact west into the Built property 4-18 Doncaster Avenue. The red line in the attached figure displays the location of impact to the east.

Site location map



Site contents information

open/closed site:

Site condition:

Features:

1.

Artefact

Number of
features

1000

Length of
feature(s)
extent (m)

25

Width of
feature (s)
extent (m)

25

Scarred Trees

Scar Depth Regrowth
(cm) (cm)

Scar shape Tree Species

Description:

Stone artefact site located on the top surface of an intact dune, below ~1m of historical fill.

Features:

2.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth Regrowth
(cm) (cm)

Scar shape Tree Species

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
3.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
4.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
5.			

Description:

Scarred Trees

Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Other Site Info:

The site has been archaeologically excavated within the TfNSW owned property (east). A small portion of the site extends (presumably) intact west into the Built property 4-18 Doncaster Avenue. The red line in the attached figure displays the location of impact to the east.

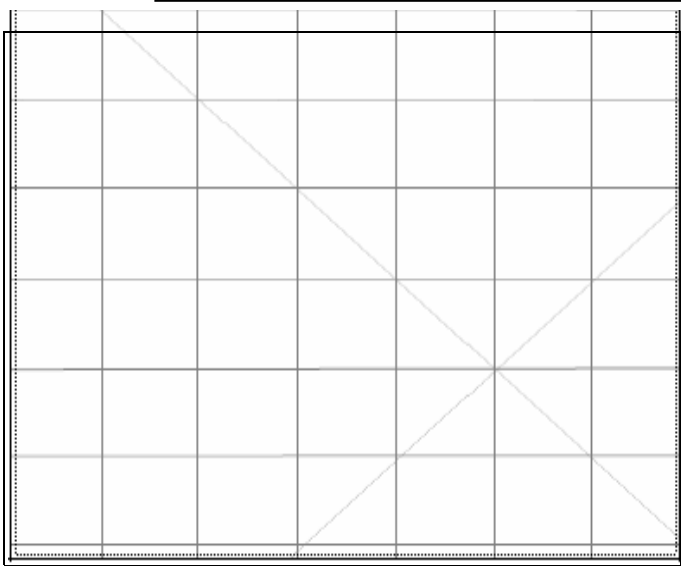
Site plan



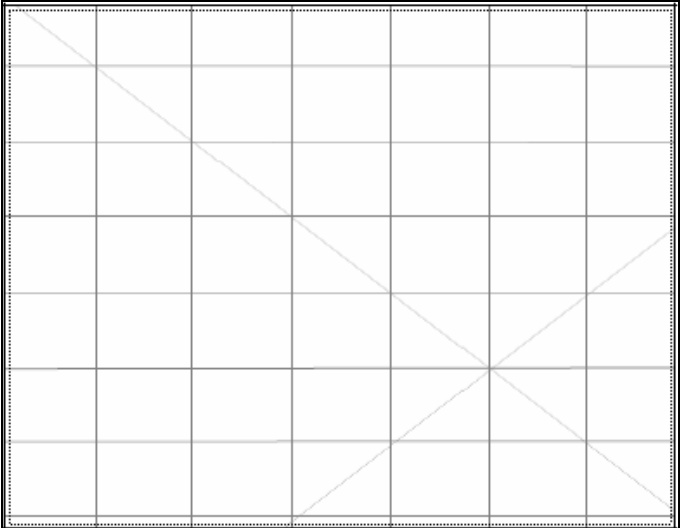
Site photographs



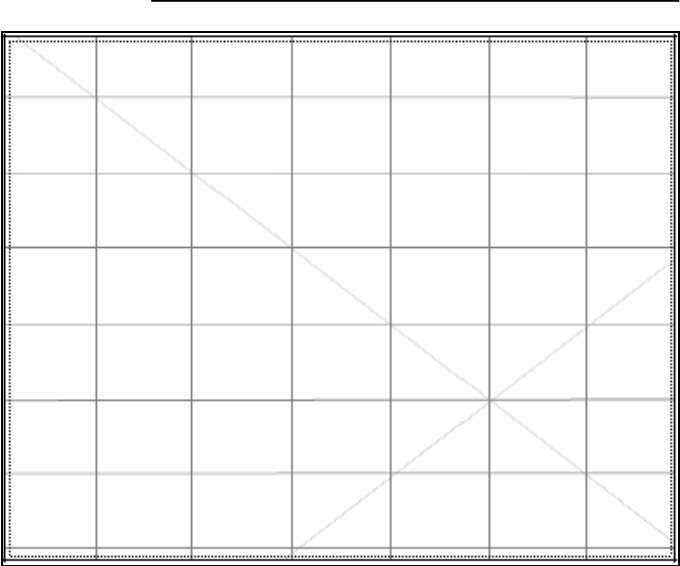
Description:



Description:



Description:



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type:

Gender

General

☒

Location

☐

Why is this site restricted?:

The details of this site, its contents and value are currently subject to strict confidentiality.

Further information contact

Title

Surname

First name

Organisation:

Address:

Phone:

E-mail:

Appendix C

DA Application Drawings

29 June 2017

171025

Built Pty Ltd
Level 7, 343 George Street
Sydney NSW 2000

(Email: vincetusa@built.com.au)

Attention: Vince Tusa

4 -18 DONCASTER AVE., KENSINGTON

Structural Floor System over Conservation Management Area

Dear Vince

The floor slabs located directly over the conservation management area (refer to drawings SK100/01, SK101/02 & SK102/03 – location of conservation management area) are to be fully suspended concrete slabs supported by piled foundations located outside this zone. The slabs located over this area will be detailed to allow this section of slab to be removed should access to the ground be required.

Refer to Fig 1 & 2 attached for proposed details

Should you require anything further please contact the undersigned.

Yours faithfully

TAYLOR THOMSON WHITTING (NSW) PTY LTD



BARRY YOUNG
Director

Encl. – Drawings SK100/01, SK101/02 & SK102/3
Figure 1 & 2

P:\2017\1710\171025\Letters\170629 - Structural Floor System over Conservation Mgmt Area Letter BY ct.docx



Project
Residential Development
4-18 Doncaster Avenue
Kensington

Subject
Railway Stabling Yard (RSY 1)
— Site Boundary
— RSY

Drawing Name
Site Plan

Drawing No: SK100/01



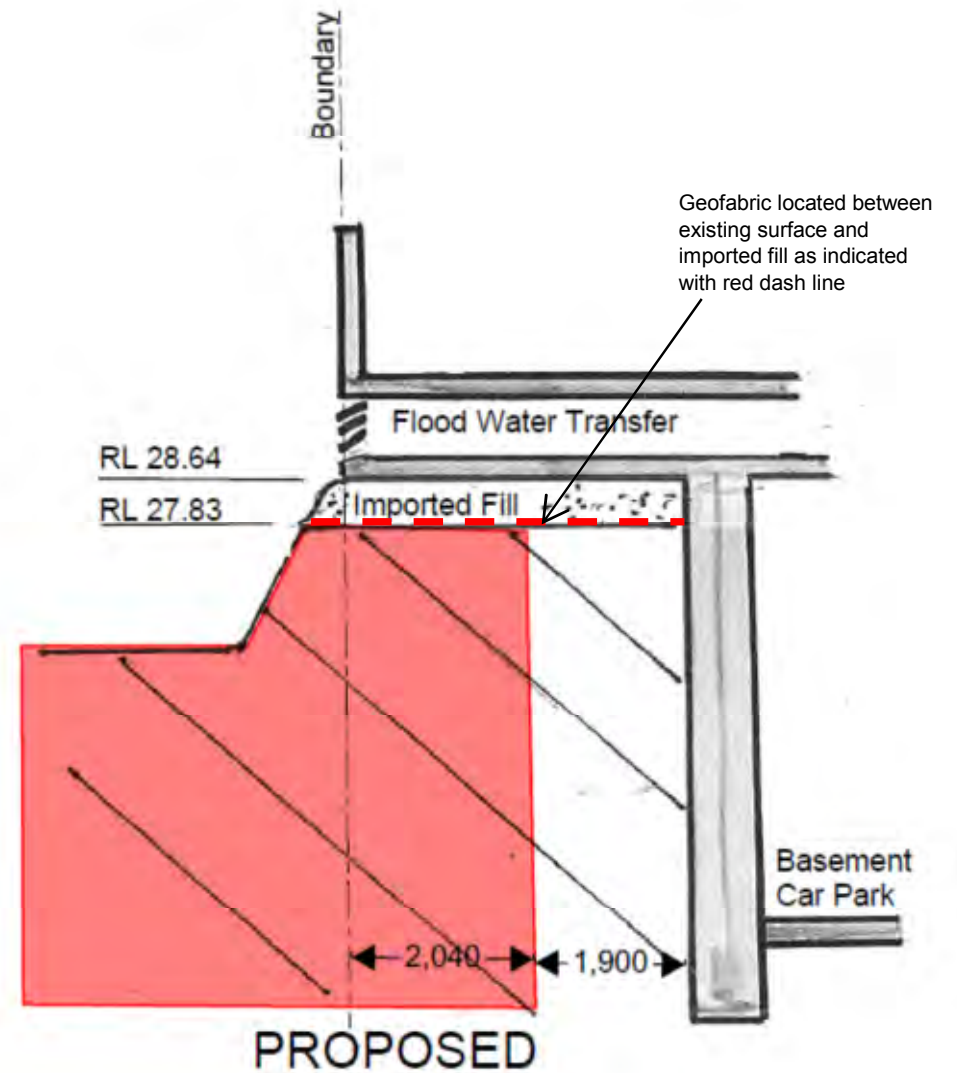
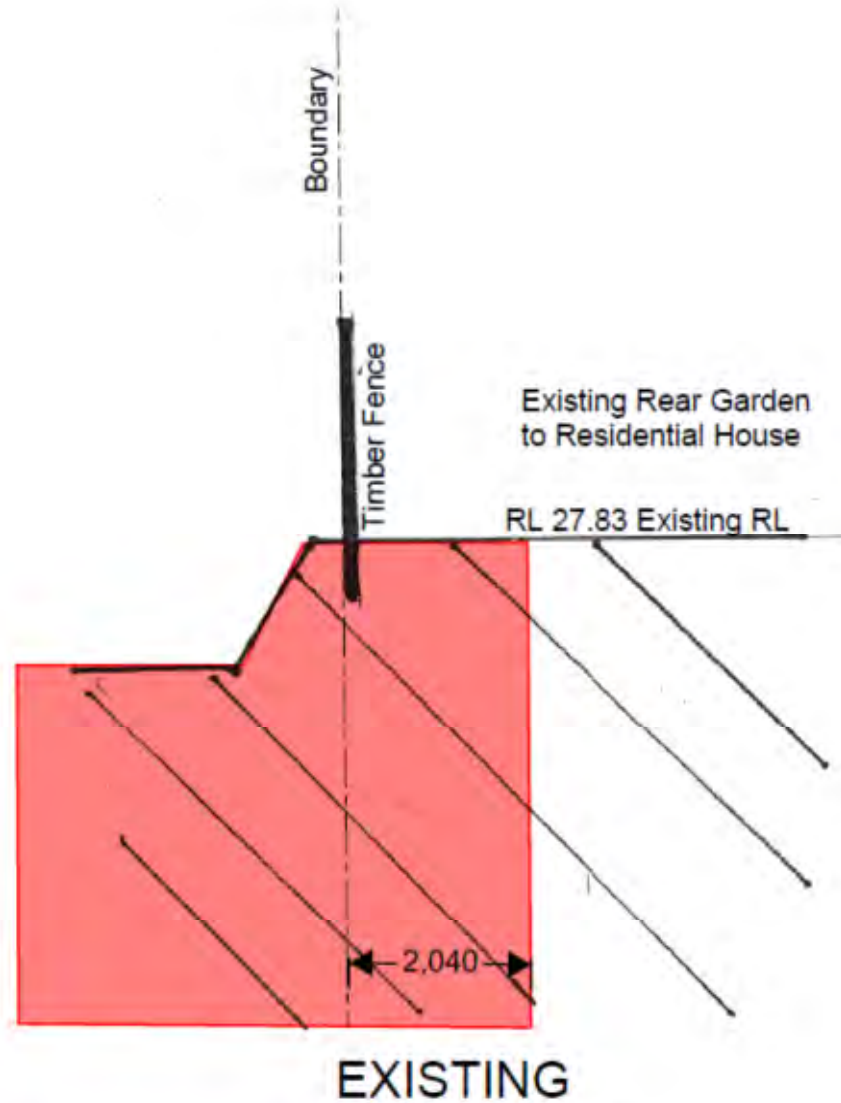
Built.

Project
Residential Development
4-18 Doncaster Avenue
Kensington

Subject
Railway Stabling Yard (RSY 1)
Location of Conservation
Management Area [REDACTED]

Drawing Name
Location of Conservation Management Area

Drawing No: SK101/02



Built.

Project
Residential Development
4-18 Doncaster Avenue
Kensington

Subject
Railway Stabling Yard (RSY 1)
Conservation Management Area

Drawing Name
Existing and Proposed Sections

Drawing No: SK101/03

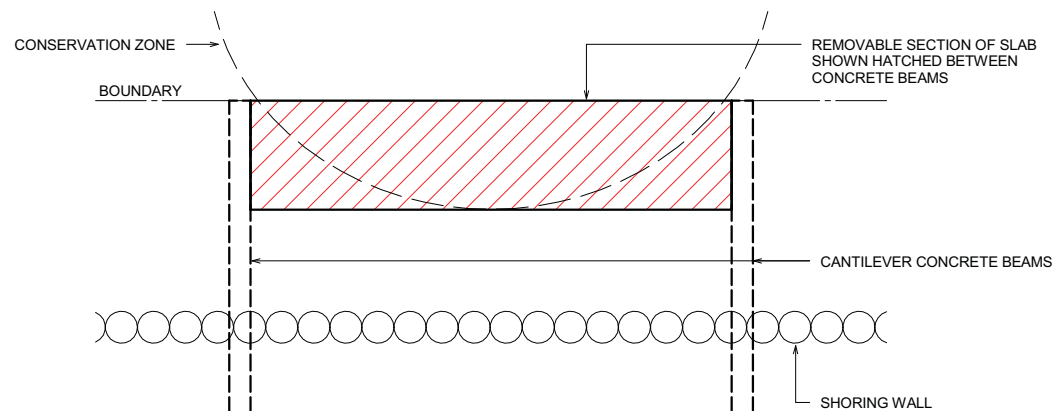


FIGURE 1 - PLAN
CONSERVATION MANAGEMENT AREA

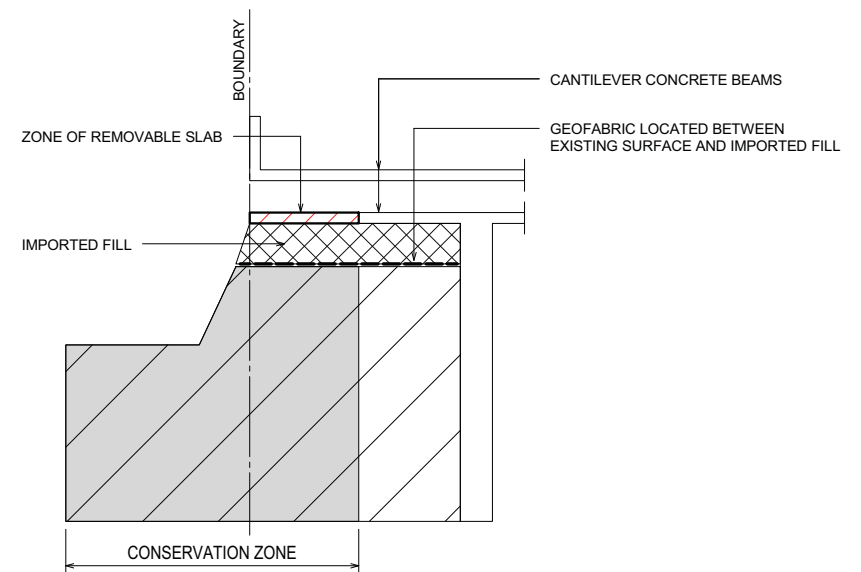


FIGURE 2 - SECTION
STRUCTURE OVER CONSERVATION MANAGEMENT AREA

Appendix D

Conservation Management Area Design Plans

18 October 2016

Our Ref: DA/931/2015

DEVELOPMENT APPLICATION NOTICE OF DETERMINATION

*Issued under the Environmental Planning and Assessment Act 1979
Sections 80, 80A & 81 (1)(a)*

Development Application No: DA/931/2015

Mr N Roumanous
Level 6 343 George St
SYDNEY NSW 2000

Property Address: 4-18 Doncaster Avenue, KENSINGTON NSW 2033,

Description of Work: Demolition of existing dwellings at numbers 4-8, 14 and 16 Doncaster Avenue and construction of new three storey residential flat building comprising of 48 dwellings, retention and refurbishment of existing terraces at numbers 10 and 12 Doncaster Avenue and basement parking for 71 vehicles (Heritage Item and Heritage Conservation Area).

Determination: **Approved**

Determination Date: **11 October 2016 (PCM)**

Consent to operate from: 11 October 2016

Consent to lapse on: 11 October 2021

Prior to the commencement of any building, construction, 'fit-out' or subdivision works, a construction certificate must be obtained from the Council or an accredited certifier, in accordance with Section 81A (2) (a) of the Environmental Planning and Assessment Act 1979.

Conditions of Consent

GENERAL CONDITIONS

The development must be carried out in accordance with the following conditions of consent.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000* and to provide reasonable levels of environmental amenity.

1. The development must be implemented substantially in accordance with the plans and supporting documentation listed below and endorsed with Council's approved stamp, except where amended by Council in red and/or by other conditions of this consent:

English If you need help to understand this letter, please come to Council's Customer Service Centre and ask for assistance in your language or you can contact the Telephone Interpreter Service (TIS) on 131 450 and ask them to contact Council on 9399 0999.	Greek Αν χρειάζεστε βοήθεια για να καταλάβετε αυτή την επιστολή, παρακαλείστε να έρθετε στο Κέντρο Εξυπηρέτησης Πελατών της Δημαρχίας (Council Customer Service Centre) και να ζητήσετε βοήθεια στη γλώσσα σας ή τηλεφωνήστε στην Τηλεφωνική Υπηρεσία Διεγερμένων (Telephone Interpreter Service – TIS) τηλ. 131 450 και να ζητήσετε να επικοινωνήσουν με τη Δημαρχία τηλ. 9399 0999.	Italian Se avete bisogno di aiuto per capire il contenuto di questa lettera, recatevi presso il Customer Service Centre del Municipio dove potrete chiedere di essere assistiti nella vostra lingua; oppure mettetevi in contatto con il Servizio Telefonico Interpreti (TIS) al 131 450 e chiedete loro di mettersi in contatto col Municipio al 9399 0999.
Croatian Ako vam je potrebna pomoć da biste razumjeli ovo pismo, molimo dodite u Općinski službeni centar za klijente (Council's Customer Service Centre) i zatražite pomoć na svom jeziku, ili možete nazvati Telefonsku službu tumača (TIS) na 131 450 i zamoliti njih da nazovu Općinu na 9399 0999.	Spanish A la persona que necesite ayuda para entender esta carta se le ruega venir al Centro de Servicios para Clientes [Customer Service Centre] de la Municipalidad y pedir asistencia en su propio idioma, o bien ponerse en contacto con el Servicio Telefónico de Intérpretes [“TIS”], número 131 450, para pedir que le comuniquen con la Municipalidad, cuyo teléfono es 9399 0999.	Vietnamese Nếu quý vị không hiểu lá thư này và cần sự giúp đỡ, mời quý vị đến Trung Tâm Dịch Vụ Hướng Dẫn Khách Hàng của Hội Đồng Thành Phố (Council's Customer Service Centre) để có người nói ngôn ngữ của quý vị giúp hay quý vị có thể liên lạc Dịch Vụ Thông Dịch qua Điện Thoại (TIS) ở số 131 450 và yêu cầu họ liên lạc với Hội Đồng Thành Phố (Council) ở số 9399 0999.
Polish Jesli potrzebujesz pomocy w zrozumieniu treści tego pisma, przyjdź do punktu obsługi klientów (Customer Service Centre) przy Radzie Miejskiej i poproś o pomoc w języku polskim, albo zadzwoń do Telefonicznego Biura Tłumaczy (Telephone Interpreter Service – TIS) pod numer 131 450 i poproś o skontaktowanie się z Radą Miejską (Council) pod numerem 9399 0999.	Indonesian Jika Anda memerlukan bantuan untuk memahami surat ini, silakan datang ke Pusat Pelayanan Pelanggan (Customer Service Centre) Pemerintah Kotamadya (Council) dan mintalah untuk bantuan dalam bahasa Anda, atau Anda dapat menghubungi Jasa Juru Bahasa Telepon (Telephone Interpreter Service - TIS) pada nomor 131 450 dan meminta supaya mereka menghubungi Pemerintah Kotamadya pada nomor 9399 0999.	Turkish Bu mektubu anlamak için yardıma ihtiyacınız varsa, lütfen Belediye'nin Müşteri Hizmetleri Merkezi'ne gelip kendi dilinizde yardım isteyiniz veya 131 450'den Telefonla Tercüme Servisi'ni (TIS) arayarak onlardan 9399 0999 numaradan Belediye ile ilişkiye geçmelerini isteyiniz.
Hungarian Amennyiben a levél tartalmát nem érti és segítségre van szüksége, kérjük látogassa meg a Tanácsház Ügyfél Szolgálatát (Customer Service Centre), ahol magyar nyelven kaphat felvilágosítást, vagy hívja a Telefon Tolmacs Szolgálatot (TIS) a 131 450 telefonszámon és kérje, hogy kapcsolják a Tanácsházat a 9399 0999 telefonszámon.	Czech Jestliže potřebujete pomoc při porozumění tohoto dopisu, navštivte prosím naše Středisko služeb pro veřejnost (Council's Customer Service Centre) a požádejte o poskytnutí pomoci ve vaší řeči anebo zavolejte Telefonní tlumočnickou službu (TIS) na tel. číslo 131 450 a požádejte je, aby oni zavolali Městský úřad Randwick na tel. číslo 9399 0999.	Arabic إذا أردت مساعدة لفهم هذه الرسالة، نرجوكم الحضور إلى مركز خدمة عملاء المجلس واطلب المساعدة في لغتك، أو يمكنك الاتصال بخدمة الترجمة الهاتفية (TIS) على هاتف رقم ١٣١ ٤٥٠ واطلب منهم الاتصال بالمجلس على رقم ٩٣٩٩ ٠٩٩٩.
Chinese 如果你需要人幫助你了解這封信的內容，請來市政會顧客服務中心要求翻譯服務，或者與電話傳譯服務 (TIS) 聯係，號碼是 131 450。請他們幫助你打電話給市政會，號碼是 9399 0999。	Russian Если Вам требуется помощь, чтобы разобраться в этом письме, то, пожалуйста, обратитесь в Муниципальный Центр Обслуживания Клиентов и попросите оказать Вам помощь на Вашем языке или же Вы можете позвонить в Телефонную Службу Переводчиков (TIS) по номеру 131 450 и попросить их связаться с Муниципалитетом по номеру 9399 0999.	Serbian Ako vam treba pomoć da razumete ovo pismo, molimo vas da dođete do Centra za usluge mušterijaма при Општини (Customer Service Centre) и замолите их да вам помогну на vašem jeziku, или можете nazvati Telefonsku prevodilačku službu (TIS) na 131 450 и замолите их да вас poveжу са Општином на 9399 0999.

Plan/Drawing No.	Drawn by	Dated
DA-0102 Site Analysis Plan	SJB	20.05.2016
DA-0103 Site Analysis Plan Proposed Demolition Rev 05	SJB	20.05.2016
DA-0201 Floor Plan Basement Rev 07	SJB	10.06.2016
DA-0202 Floor Plan Ground Rev 07	SJB	10.06.2016
DA-0203 Floor Plan Level 1 Rev 07	SJB	10.06.2016
DA-0204 Floor Plan Level 2 Rev 07	SJB	10.06.2016
DA-0205 Floor Plan Roof Rev 08	SJB	13.07.2016
DA-0210 Floor Plan Floodwater Channel Locations Rev 04	SJB	18.12.2015
DA-0501 Elevation North and West Rev 08	SJB	13.07.2016
DA-0502 Elevation East and South Rev 08	SJB	13.07.2016
DA-0511 Elevation East and South Flood Water channel locations Rev 04	SJB	18.12.2015
DA-0512 Elevation West and North Flood Water channel locations Rev 04	SJB	18.12.2015
DA-0601 Sections A and C Rev 08	SJB	13.07.2016
DA-0602 Sections B D and E Rev 08	SJB	13.07.2016
DA-0901 Detail Plans: 10 and 12 Doncaster Avenue Sheet 01 Rev 05	SJB	20.05.2016
DA-0902 Detail Plans: 10 and 12 Doncaster Avenue Sheet 02 Rev 05	SJB	20.05.2016
DA-0903 Detail Plans: 10 and 12 Doncaster Avenue Sheet 03 Rev 05	SJB	20.05.2016
DA-0904 Detail Plans: 10 and 12 Doncaster Avenue Sheet 04 Rev 05	SJB	20.05.2016
DA-0905 Detail Plans: 10 and 12 Doncaster Avenue Sheet 05 Rev 05	SJB	20.05.2016
DA-0911 Apartment Plans Adaptable Layouts Sheet 02 Rev 04	SJB	18.12.2016
DA-2501 Demolition Floor Plan Rev 05	SJB	20.05.2016

BASIX Certificate No.	Dated	Received by Council
A238485	21 December 2015	24 December 2015
A238488	21 December 2015	24 December 2015
694225M	21 December 2015	24 December 2015

Amendment of Plans & Documentation

2. The approved plans and documents must be amended in accordance with the following requirements:
 - a) The following windows shall be treated with one of the following privacy measures: minimum sill height of 1.6m above floor level; fixed, obscure glazing to a height of 1.6m; or fixed, horizontal external privacy louvres-
 - study window on southern elevation of Unit 0.1,
 - study window on southern elevation of Unit 0.9,
 - bedroom windows on the northern elevation of the ground floor of Unit 0.12,
 - windows on the northern and southern elevations of the ground floor of Units 0.18, 0.19 and 0.20,
 - bathroom windows in Unit 0.5, 1.5, 1.8, 2.5, 2.8
 - living room windows on southern elevation of Units 1.9 and 2.9

- b) The following windows shall be highlight windows with a minimum sill height of 1.6m above floor level:
 - bedroom windows on the northern elevation of Unit 0.5,
- c) The following windows should be fixed and consist of glass blocks for privacy and security:
 - West elevation windows of Unit 0.4.
- d) To avoid privacy, maintenance and security issues the following landscaped areas shall be fenced and allocated to the respective units:
 - Common landscaped area along the western and northern sides of Unit 0.10.
 - Common landscaped area along the southern and western sides of Unit 0.11.

In both cases side access should be provided to the allocated landscaped areas.

- e) The windows on the southern elevation of Levels 1 and 2 of Unit 0.17 and the southern elevation of Levels 1 and 2 of Unit 1.16 are to be minimum sill height of 1.6m above floor level; fixed, obscure glazing to a height of 1.6m; or fixed, horizontal external privacy louvres in order to minimise privacy impacts on 20 Doncaster Avenue.
- f) The allocation of visitor and resident car spaces must meet the minimum requirement and each adaptable unit is to be allocated at least one adaptable resident space.
- g) Individual storage must be provided to each dwelling in accordance with the rates set out in the Apartment Design Guide.
- h) No bin storage is to be located in the front setback of the development.
- i) Retractable or demountable clothes lines are to be provided in the private open space of each dwelling unit.
- j) Details of the front fences including elevations must be submitted to Council's Manager Development Assessment for approval prior to issuing of a construction certificate. The proposed fence must be generally in accordance with the relevant DCP criteria in terms of height and form.

Heritage Management

3. An archival recording salvage plan must be undertaken prior to works commencing on the site. The archival recording should specifically include the dwelling at no.4-8 Doncaster Avenue, the rear wings and outbuildings to be demolished at nos.10-12 Doncaster Avenue, and the semi-detached pair at nos.14-16 Doncaster Avenue. The recording should also include context photographs of the existing site as viewed from the street. The archival recording shall be prepared and submitted to and approved by Council's Director City Planning, in accordance with Section 80A (2) of the Environmental Planning and Assessment Act 1979 prior to a construction certificate being issued for the development. This recording shall be in accordance with the NSW Heritage Office 2006 Guidelines for Photographic Recording of Heritage Items using Film or Digital Capture. Two copies of the endorsed archival recording shall be presented to Council, one of which shall be placed in the Local History Collection of Randwick City Library.
4. The conservation approach and schedules of internal and external works detailed in the Schedule of Conservation Works prepared by GBA Heritage and dated May

2016, are to be implemented in conjunction with the proposed development. An architect suitably qualified and experienced in heritage conservation shall be engaged to oversee the implementation to ensure the use of technically sound and appropriate techniques. All work shall be carried out in accordance with the principles of the Australia ICOMOS Burra Charter and to the satisfaction of the Director City Planning.

5. The rear (eastern) 6.2m of Level 2 of the two south-western modules (corresponding to that part of Level 2 with a flat roof) is to be setback on the northern and southern sides by a minimum of 0.15m from the line of the lower Levels and a change of wall finish introduced. Level 2 of each module is to read as an attic within a two storey building. Amended drawings shall be prepared and submitted to and approved by Council's Director City Planning, in accordance with Section 80A (2) of the Environmental Planning and Assessment Act 1979 prior to a construction certificate being issued for the development.
6. The colours, materials and finishes of the external surfaces to the building are to be compatible with the existing heritage items and surrounding buildings in the heritage conservation area and consistent with the architectural style of the building. Further documentation, including elevations detailing the proposed colours, materials and textures (ie- a schedule and brochure/s or sample board) are to be submitted to and approved by Council's Director City Planning, in accordance with Section 80A (2) of the Environmental Planning and Assessment Act 1979 prior to a construction certificate being issued for the development.

Aboriginal Archaeology

7. The subject site is adjacent to the Stabling Yards for the CBD and South East Light Rail Project where a significant aboriginal archaeological discovery has recently been made. An Aboriginal Archaeological investigation is to be carried out for the site to determine if any Aboriginal objects (as defined by the National Parks & Wildlife Act 1974) are likely to be present. This Preliminary Assessment of Aboriginal Archaeology is to be submitted to and approved by Council's Director City Planning, in accordance with Section 80A (2) of the Environmental Planning and Assessment Act 1979 prior to a construction certificate being issued for the development.
8. The La Perouse Aboriginal Land Council should be invited to monitor topsoil stripping and excavation works (including bulk excavation, remediation, cut and fill and excavation for services) on the development site, to ensure any Aboriginal sites or objects buried beneath fills are identified and appropriately managed.
9. If any Aboriginal sites or objects are found during site construction work, excavation should cease immediately in that area. The La Perouse Aboriginal Land Council should be notified and advice sought before work can recommence. It is an offence under Section 90 of the National Parks and Wildlife Act 1974 to disturb, deface or destroy an Aboriginal site or object without prior consent of the Director General of DECC.

Historical Archaeology

10. No.18 Doncaster Avenue was formerly occupied by a 1914 single storey dwelling which was demolished after 1943 to allow for additional vehicular access to the Racecourse site. In the event that historical archaeological remains or deposits on this site are exposed during the works, the excavation works shall cease immediately and an evaluation of their potential extent and significance should be undertaken and the Heritage Council of NSW be notified under the requirements of the Heritage Act.

Vehicle passing area

11. The application must be modified to incorporate a vehicle passing area within the first 10-12 metres of the internal driveway. This applicant must engage a suitable qualified traffic engineer to design the passing area. Away from the passing bay the internal driveway must be a minimum of 3.6 metres wide (with 2 x 300mm kerbs) in general accordance with AS 2890.1-2004. The proposed bin storage area must be redesigned to accommodate the passing area. All internal circulation ramps must be suitably designed for two (2) way movements. The applicant must liaise with Council's Development Engineer Coordinator to obtain Council's requirements for the passing bay and the internal driveway in general.

Crime Prevention Through Design treatments

12. The approval is subject to the following conditions recommended by NSW Police:

- A Closed Circuit Television System which complies with Australian Standards – Closed Circuit Television System (CCTV) AS:4608.1.2.3.4 is to be installed to monitor activity in and around the development. The system must conform with Federal and State Privacy and Surveillance legislation.
- A minimum of two cameras must be strategically mounted across the front of the development to monitor activity around these areas. These cameras should be positioned to watch one another to protect them from tampering.
- One or more cameras must be mounted at entry/egress points to monitor activity around these areas. This equipment should be secured away from public access to restrict tampering.
- Lighting must be commensurate with Closed Circuit Television requirements to enhance surveillance during darkness.
- Gates must be secured with locks which comply with AS Lock Sets:4145
- The main entry / egress doors to the buildings must be fitted with an access control system similar to key, code or card operated system to restrict, control the movement of people and vehicles into and throughout the site.
- An intercom system must be installed at entry/egress points to enable visitors to communicate with businesses and residents within the site.
- Doors must be fitted with locksets which comply with Australian Standards – Locksets for buildings and the building code.
- Doors to plant and equipment areas must be fitted with access control to restrict and control movement of authorized people into and throughout these areas in order to reduce opportunities for injury to people or tampering with equipment.
- An access control system similar to key, code or card operated system must be fitted to these doors or gates to restrict and control the movement of people and vehicles into the car park.
- Storerooms in car park areas must be of solid construction. The doors to storerooms must be fitted with the locksets which comply with Australian Standards – Locksets for buildings and the building code.
- The street number must be prominently displayed at the front of the property.
- The number of each level must be prominently displayed adjacent to elevators and fire stairs.
- The number of each unit must be prominently displayed on front doors. The numbers should be in contrasting colours to building materials and be a minimum height of 120mm.
- Signs should be posted around the property to warn intruders of what security treatments have been implemented to reduce opportunities for crime eg warning these premises are under electronic surveillance, etc.
- Directorial signage should be posted at decision making points eg entry /egress points to provide guidance for visitors
- An Intruder Alarm System (IAS) which complies with Australian Standards –

Systems Installed within Client Premises AS:2201 must be installed in the development to enhance physical security. The IAS must be monitored by a security company.

- Detectors must be fitted to the doors of plant room areas to detect unauthorized access to these areas. Light emitted diodes within the detectors should be deactivated to avoid offenders being able to test the range of the system.
- The system must be checked and tested on a regular basis (at least monthly) to ensure it is operating effectively.
- A supplementary alarm system, such as Global Satellite Mobile or Radio Frequency system should be used to transmit alarm signal by either mobile telephone or radio frequency.

REQUIREMENTS BEFORE A CONSTRUCTION CERTIFICATE CAN BE ISSUED

The following conditions of consent must be complied with before a 'Construction Certificate' is issued by either Randwick City Council or an Accredited Certifier. All necessary information to demonstrate compliance with the following conditions of consent must be included in the documentation for the construction certificate.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000*, Council's development consent conditions and to achieve reasonable levels of environmental amenity.

Consent Requirements

13. The requirements and amendments detailed in the 'General Conditions' must be complied with and be included in the construction certificate plans and associated documentation.

Section 94A Development Contributions

14. In accordance with Council's Section 94A Development Contributions Plan effective from 21 April 2015, based on the development cost of \$16,716,881 the following applicable monetary levy must be paid to Council: \$167,168.81.

The levy must be paid in **cash, bank cheque** or by **credit card** prior to a construction certificate being issued for the proposed development. The development is subject to an index to reflect quarterly variations in the Consumer Price Index (CPI) from the date of Council's determination to the date of payment. Please contact Council on telephone 9399 0999 or 1300 722 542 for the indexed contribution amount prior to payment.

To calculate the indexed levy, the following formula must be used:

$$\text{IDC} = \text{ODC} \times \text{CP2/CP1}$$

Where:

IDC = the indexed development cost

ODC = the original development cost determined by the Council

CP2 = the Consumer Price Index, All Groups, Sydney, as published by the ABS in respect of the quarter ending immediately prior to the date of payment

CP1 = the Consumer Price Index, All Groups, Sydney as published by the ABS in respect of the quarter ending immediately prior to the date of imposition of the condition requiring payment of the levy.

Council's Section 94A Development Contribution Plans may be inspected at the Customer Service Centre, Administrative Centre, 30 Frances Street, Randwick or at www.randwick.nsw.gov.au.

Long Service Levy Payments

15. The required Long Service Levy payment, under the *Building and Construction Industry Long Service Payments Act 1986*, must be forwarded to the Long Service Levy Corporation or the Council, in accordance with Section 109F of the *Environmental Planning & Assessment Act 1979*.

At the time of this development consent, Long Service Levy payment is applicable on building work having a value of \$25,000 or more, at the rate of 0.35% of the cost of the works.

Security Deposits

16. The following security deposits requirement must be complied with prior to a construction certificate being issued for the development, as security for making good any damage caused to Council's assets and infrastructure; and as security for completing any public work; and for remedying any defect on such public works, in accordance with section 80A(6) of the *Environmental Planning and Assessment Act 1979*:

- \$10000.00 - Damage / Civil Works Security Deposit

Security deposits may be provided by way of a cash, cheque or credit card payment and is refundable upon a satisfactory inspection by Council upon the completion of the civil works which confirms that there has been no damage to Council's infrastructure.

The owner/builder is also requested to advise Council in writing and/or photographs of any signs of existing damage to the Council roadway, footway, or verge prior to the commencement of any building/demolition works.

To obtain a refund of relevant deposits, a *Security Deposit Refund Form* is to be forwarded to Council's Director of City Services upon issuing of an occupation certificate or completion of the civil works.

Electricity Substation

17. The applicant must liaise with Ausgrid prior to obtaining a construction certificate (for any above ground works), to determine whether or not an electricity substation is required for the development. Any electricity substation required for the site as a consequence of this development shall be located within the site and shall be screened from view. The proposed location and elevation shall be shown on relevant construction certificate and landscape plans.

Sydney Water

18. All building, plumbing and drainage work must be carried out in accordance with the requirements of the Sydney Water Corporation.

The approved plans must be submitted to the Sydney Water Tap in™ online service, to determine whether the development will affect Sydney Water's waste water and water mains, stormwater drains and/or easements, and if any further requirements need to be met.

The Sydney Water Tap in™ online service replaces the Quick Check Agents as of 30 November 2015

The Tap in™ service provides 24/7 access to a range of services, including:

- Building plan approvals

- Connection and disconnection approvals
- Diagrams
- Trade waste approvals
- Pressure information
- Water meter installations
- Pressure boosting and pump approvals
- Change to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's Tap in™ in online service is available at:
<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

The Principal Certifying Authority must ensure that the developer/owner has submitted the approved plans to Sydney Water Tap in online service.

Landscape Plans

19. The Certifying Authority/PCA must ensure that the Landscape Plans submitted as part of the approved Construction Certificate are substantially consistent with the Amended Cover Page, Landscape Plans 1-2 and Section by Myles Baldwin Design, dwg's MBD_12D_01-03 & 10, issue H, dated 10.06.16.

Department of Primary Industries - General Conditions

20. An authorisation shall be obtained for the take of groundwater as part of the activity. Groundwater shall not be pumped or extracted for any purpose other than temporary construction dewatering at the site identified in the development application. The authorisation shall be subject to a currency period of 12 months from the date of issue and will be limited to the volume of groundwater take identified.
21. The design and construction of the building must prevent any take of groundwater after the authorisation has lapsed by making any below-ground levels that may be impacted by any water table watertight for the anticipated life of the building. Waterproofing of below-ground levels must be sufficiently extensive to incorporate adequate provision for unforeseen high water table elevations to prevent potential future inundation.
22. Sufficient permanent drainage shall be provided beneath and around the outside of the watertight structure to ensure that natural groundwater flow is not impeded and: A. any groundwater mounding at the edge of the structure shall be at a level not greater than 10 % above the level to which the water table might naturally rise in the location immediately prior to the construction of the structure; and B. any elevated water table is more than 1.0 m below the natural ground surface existent at the location immediately prior to the construction of the structure; and C. where the habitable structure is founded in bedrock or impermeable natural soil then the requirement to maintain groundwater flows beneath the structure is not applicable.
23. Construction methods and material used in and for construction shall be designed to account for the likely range of salinity and pollutants which may be dissolved in groundwater, and shall not themselves cause pollution of the groundwater.
24. Department of Primary Industries (Water) (DPI) requires documentation (referred to as 'report') comprising measurements, maps, bore logs, calculations, results, discussion and justification for various matters related to the dewatering process. Information will be required at several stages: prior to construction commencing (initial report - which will accompany the application for the authorisation), at any time when an authorisation renewal is required or a significant change in

activities occurs (intermediate report); and at the completion of dewatering and related operations (completion report). Reports need to be submitted to DPI Water at Parramatta Office, in a format consistent with electronic retrieval without editing restrictions; raw data should be presented in Excel spreadsheets without editing restrictions.

Department of Primary Industries – Prior to Excavation

25. The following shall be included in the initial report:

- a. measurements of groundwater levels beneath the site from a minimum of three relevant monitoring bores, together with details of the bores used in the assessment including bore logs and three-dimensional identification information.
- b. a map of the site and its immediate environs depicting the water table (baseline conditions) shown relative to the topography and approved construction footprint from the surface level and below. An assessment of the potential variation in the water table during the life of the proposed building together with a discussion of the methodology and information on which this assessment is based.
- c. details of the present and potential groundwater flow paths and hydraulic gradients in and around the site; the latter in response to the final volumetric emplacement of the construction.
- d. a schedule for the ongoing water level monitoring and description of the methodology to be used, from the date of consent until at least two months after the cessation of pumping. (DPI Water prefers that monitoring be undertaken on a continuous basis using automatic loggers in boreholes).

26. The Applicant shall assess the likely impacts of the dewatering activities on other groundwater users or structures or public infrastructure; this assessment will include an appropriate bore, spring or groundwater seep census and considerations relevant to potential subsidence or excessive settlement induced in nearby buildings and property, and be documented together with all calculations and information to support the basis of these in the initial report.

27. Groundwater quality testing of samples taken from outside the footprint of the proposed construction, with the intent of ensuring that as far as possible the natural and contaminant hydrochemistry of the potential dewatered groundwater is understood, shall be conducted on a suitable number of samples and tested by a NATA-certified laboratory. Details of the sampling locations and the protocol used; together with the test results accompanied by laboratory test certificates shall be included in the initial report. An assessment of results must be done by suitably qualified persons with the intent of identifying the presence of any contaminants and comparison of the data against accepted water quality objectives or criteria for the intended dewatering purpose. In the event of adverse quality findings, the Applicant must develop a plan to mitigate the impacts of the hydrochemistry on the dewatered groundwater and present the details of all assessments and plans in the initial report.

28. Groundwater quality testing generally in accordance with Clause 8, shall be undertaken on any anniversary or other renewal or alteration of any dewatering authorisation.

29. A reasonable estimate of the total volume of groundwater to be extracted shall be calculated and included in the initial report; together with details and calculation methods for the parameters and supporting information to confirm their

development or measurement (e.g. permeability predicted by slug-testing, pump-testing or other means).

30. A copy of a valid consent for the development shall be provided in the initial report.
31. The method of disposal of pumped water shall be nominated (i.e. reinjection, drainage to the stormwater system or discharge to sewer) and a copy of the written permission from the relevant controlling authority shall be provided in the initial report. The disposal of any contaminated pumped groundwater (sometimes called "tailwater") must comply with the provisions of the Protection of the Environment Operations Act 1997 and any requirements of the relevant controlling authority.
32. Contaminated groundwater (i.e. above appropriate NEPM 2013 thresholds) shall not be reinjected into any aquifer. The reinjection system design and treatment methods to remove contaminants shall be nominated and included in the initial report and any subsequent intermediate report as necessary. The quality of any pumped water that is to be reinjected must be demonstrated to be compatible with, or improve, the intrinsic or ambient groundwater in the vicinity of the reinjection site.
33. Prior to lodgement of a Construction Certificate application the applicant must obtain from the NSW Department of Primary Industries – Water (NSW DPI-Water), the general terms of approval and any specific requirements for dewatering of the site to facilitate construction of the basement carpark levels. In particular, the applicant must obtain in writing the Department's general terms of approval provided to Council on 15 February 2016, (NSW DPI - Water reference 10ERM2015/1275). A copy of the general Terms of Approval must be submitted to the Certifying Authority prior to the issuing of a Construction Certificate.

The Construction Certificate application must demonstrate compliance with the general terms of approval. No construction certificate is to be issued until such time as the applicant demonstrates to the satisfaction of the NSW Department of Primary Industries – Water and the Certifying Authority that the proposed method for construction of the basement carpark and dewatering of the site is strictly in accordance with the NSW Department of Primary Industries – Water's requirements and best current engineering practice.

No dewatering of the site shall take place until such time as the applicant has received authorization from the NSW DPI – Water under the Water Management Act 2000. A copy of the authorisation must be forwarded to Council prior to the commencement of any dewatering on the site. A valid current authorisation from the NSW DPI - Water must be in place at all times to carry out dewatering activities, and all conditions and requirements of the NSW DPI - Water must be complied with at all times.

Bicycle Parking

34. Bicycle parking facilities shall be provided in accordance with Randwick Development Control Plan 2013. Resident and visitor spaces must be provided in secure and accessible locations. Details are to be submitted for the approval of Council's Director of City Planning, **prior to obtaining a Construction Certificate.**

Acoustic Requirements

35. The development shall comply with the acoustic requirements applicable to the development as detailed in the Department of Planning & Environment's

document titled 'Development Near rail Corridors and Busy Roads - Interim Guidelines'.

Electrolysis Analysis

36. An Electrolysis Risk Analysis shall be undertaken by an appropriately qualified consultant. It must investigate the potential electrolysis risk to the development from stray currents from the Sydney Light Rail maintenance facility. Any recommended measures as a result of the analysis must be implemented to the satisfaction of Council. A copy of the report must be submitted to Council and the Principal Certifying Authority **prior to obtaining a Construction Certificate.**

Construction Pedestrian and Traffic Management Plan

37. The applicant shall consult with Transport for NSW (CBD Coordination Office within Transport for NSW) and Sydney Light Rail team with respect to the preparation of a Construction Pedestrian and Traffic Management Plan (CPTMP). The CPTMP should specify, but not be limited to the following:

- Location of work zone;
- Location of cranes
- Haulage routes
- Construction vehicle access arrangements
- Construction hours
- Estimated number of construction vehicle movements
- Construction program
- Any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works.
- Cumulative construction impacts of projects including Sydney light Rail project. Should impacts be identified, the duration of the impacts.
- Measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts should be clearly identified and included in the CPTMP.

Prior to the commencement of any work, a copy of the final plan shall be submitted to the Coordinator General, and CBD Coordination Office for endorsement.

Protection of Transport for NSW Land, Easement or Infrastructure

38. Prior to obtaining a Construction Certificate or the commencement of construction works (excluding demolition, archaeological investigative and service relocation works), the applicant &/or Principal Certifying Authority shall liaise with Transport for NSW to ascertain its reasonable requirements in relation to the protection of Transport for NSW land, easements or infrastructure. The applicant must submit to Transport NSW all relevant documentation as requested by Transport NSW prior to obtaining a Construction Certificate or the commencement of construction works, as the case may be.

Excavation for the Proposed Development

39. Prior to the issuing of a relevant Construction Certificate, the applicant shall provide to TfNSW certification from the Geotechnical Engineer and Structural Engineer that the ground penetration works (eg excavation, piling, shoring) will not have any impact on the rail corridor and comply with TfNSW minimum track movement requirements.

REQUIREMENTS TO BE INCLUDED IN THE CONSTRUCTION CERTIFICATE

The requirements contained in the following conditions of consent must be complied with and details of compliance must be included in the construction certificate for the development.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000*, Councils development consent conditions and to achieve reasonable levels of environmental amenity.

Compliance with the Building Code of Australia

40. In accordance with section 80 A (11) of the *Environmental Planning & Assessment Act 1979* and clause 98 of the *Environmental Planning & Assessment Regulation 2000*, it is a *prescribed condition* that all building work must be carried out in accordance with the provisions of the Building Code of Australia (BCA). Details of compliance with the BCA are to be included in the construction certificate application.

Traffic conditions

41. Adequate provisions are to be made to provide pedestrian visibility and safety. All new walls (and/or landscaping) adjacent to vehicular crossings should not exceed a height of 600mm above the internal driveway level for a distance of 1.5m within the site or new walls (including landscaping) should splayed 1.5 metres by 1.5 metres. Details of compliance, to the satisfaction of the certifying authority, are to be included in the construction certificate documentation.
42. The vehicular access driveways, internal circulation ramps and the carpark areas, (including, but not limited to, the ramp grades, carpark layout and height clearances) are to be in accordance with the requirements of AS2890.1:2004. The Construction Certificate plans must demonstrate compliance with these requirements.

Design Alignment levels

43. The design alignment level (the finished level of concrete, paving or the like) at the Doncaster Avenue property boundary for driveways, access ramps and pathways or the like, must match the back of the existing footpath along the full site frontage.

The design alignment level/s at the property boundary as issued by Council and their relationship to the roadway/kerb/footpath must be indicated on the building plans for the construction certificate. The design alignment level at the street boundary, as issued by the Council, must be strictly adhered to.

Any enquiries regarding this matter should be directed to Council's Development Engineer on 9399 0924.

44. The design alignment levels (concrete/paved/tiled level) issued by Council and their relationship to the roadway/kerb/footpath must be indicated on the building plans for the construction certificate. The design alignment level at the street boundary, as issued by the Council, must be strictly adhered to.
45. The above alignment levels and the site inspection by Council's Development Engineering Section have been issued at a prescribed fee of \$5957.00 calculated at \$56.00 (inclusive of GST) per metre of site frontage. This amount is to be paid prior to a construction certificate being issued for the development.

46. The gradient of the internal access driveway must be designed and constructed in accordance with AS 2890.1 (2004) – Off Street Car Parking and the levels of the driveway must match the alignment levels at the property boundary (as specified by Council). Details of compliance are to be included in the construction certificate.

The height of the building must not be increased to satisfy the required driveway gradients.

Stormwater Drainage & Flood Management

Reconstruction / Upgrade of Council's and/or Sydney Water' Stormwater Infrastructure

47. Council records show that the Stormwater Tonkin located within the development site is under the care and control of Council. Prior to the issuing of a Construction Certificate the applicant must determine ownership of the Tonkin. Prior to the issuing of a Construction Certificate the applicant must accurately locate, (both alignment and depth), the existing stormwater Tonkin located within the subject development site. The existing Tonkin must remain fully operational until such time as an alternate stormwater drainage system has been constructed to Council's satisfaction. If it is determined that the stormwater Tonkin is under the care and control of Sydney Water, the existing Tonkin must remain fully operational until such time as an alternate stormwater drainage system has been constructed to Sydney Water's satisfaction.
48. Prior to the issuing of a Construction Certificate the applicant must accurately locate, (both alignment and depth), the existing Sydney Water controlled stormwater pipeline located within the subject development site. The existing pipeline must remain fully operational until such time as an alternate stormwater drainage system has been constructed to Sydney Water and Council's satisfaction.
49. Prior to the issuing of a Construction Certificate the applicant must provide to Council full details of the terms and conditions of approval from Sydney Water for the relocation of the Sydney water controlled pipeline located within the site.
50. If the Tonkin is found to be under the care and control of Sydney Water, prior to the issuing of a Construction Certificate the applicant must provide to Council full details of the terms and conditions of approval from Sydney Water for the relocation of the Sydney water controlled Tonkin located within the site.
51. Prior to the issuing of a Construction Certificate for the proposed development the applicant must submit to Council for approval, and have approved, a detailed catchment and stormwater flow analysis of the subject site and the catchment area upstream of the site. The analysis must be to Council's satisfaction and the approved findings / outcomes will form the basis for the design of the stormwater pipeline upgrade and associated works within the subject development site.
52. Prior to the issuing of a Construction Certificate for the proposed development the applicant must submit to Council for approval, and have approved, a detailed stormwater flow analysis of the subject site post construction, (i.e. modelling the completed development). The analysis must look at the operation of the proposed "Flood Water Transfer" areas. Specific reference must be made to the operation and capacity of the Flood Water Transfer areas and certification by a suitably qualified hydraulic engineer must be provided with the analysis. Structural details of the Flood Water Transfer areas must be provided together with recommendations for ensuring that the Flood Water Transfer areas do not

become blocked. There must be no significant rise in flood levels for all storm events up to the critical 1%AEP storm event resulting from the development.

53. Prior to the issuing of a Construction Certificate for the proposed development the applicant must submit to Council for approval and have approved "for construction" plans for the reconstruction of the Council or Sydney Water controlled Tonkin along the eastern and southern site boundaries and of any proposed overland flowpath. The plans must include full details on works within Doncaster Avenue to connect the reconstructed Tonkin to the existing trunk drainage system in Doncaster Avenue. The plans must also include a detailed specification which must be prepared in consultation with Council's Development Engineer Coordinator. All works associated with reconstruction of the Council or Sydney Water Tonkin and the overland flowpath must be carried out to the satisfaction of Council and certification from a certified practicing engineer is to be provided to Council upon completion of the works. All costs associated with reconstruction of the Council or Sydney Water Tonkin and the overland flowpath must be met by the applicant. The costs will include all works within the development site and within Doncaster Avenue.
54. Prior to the issuing of a Construction Certificate for the proposed development the applicant must submit to Council for approval, and have approved, full design details of the new junction pit in Doncaster Avenue, (i.e. the junction pit where the reconstructed pipeline will connect to the existing trunk drainage line in Doncaster Ave). The new pit must be designed by suitably qualified hydraulic and structural engineers. All costs associated with construction of the new junction pit must be met by the applicant.
55. The Tonkin shall be reconstructed as either a spigot and socket rubber ringed jointed, steel reinforced concrete pipeline (RRRCP) or a Council approved concrete box culvert. The size of the pipeline or box culvert shall be determined following approval of the detailed catchment and stormwater flow analysis referenced above however it must be sized for the critical 5%AEP (1 in 20) storm event as a minimum. Prior to backfilling, the reconstructed pipeline (or box culvert) shall be inspected and approved by the Hydraulic Engineer certifying the works and Council. Relevant Council assessment and inspection fees, as specified in Council's adopted Pricing Policy, are required to be paid to Council prior to commencement of the works. Prior to the issuing of an Occupation Certificate a minimum 3.0 metre wide drainage easement shall be created over the line of the reconstructed pipeline. The easement shall be in favour of Council and the wording and location of the easement shall be to Council's satisfaction.
56. Any structure located over or near the reconstructed pipeline (or box culvert) must be suitably designed such that if Council or Sydney Water requires access to the pipeline (or box culvert) the structure can readily be removed without adversely affecting the structural integrity of the remaining structures within the development site. The costs for removal and subsequent reinstatement of structures or landscape elements to facilitate access to the drainage infrastructure must be met by the applicant or future owners' corporation. The Construction Certificate plans must demonstrate compliance with this requirement. Prior to the issuing of an Occupation Certificate a positive covenant, (in favour of Council) must be registered on title to ensure compliance with this requirement.
57. A work-as-executed plan prepared and signed by the hydraulic engineer or a registered surveyor, must be submitted to Council prior to the issuing of an occupation certificate, detailing the as constructed details for all works within Council's road reserve (including detailed levels).

58. All drainage details (for the external drainage works) shall be prepared by a suitably qualified hydraulic consultant who shall, at the completion of the works, certify that the drainage works have been constructed in accordance with the approved drainage plans and relevant standards. The plans and specifications for all works on Council property shall be submitted to and approval by Council prior to the issuing of a construction certificate.
59. Retaining walls, fencing or other structures on or near the edges of the required drainage easement boundary should be constructed entirely outside the proposed pipeline or culvert and easement to allow full access to the pipe / culvert and pits. Footings for such structures (and the basement carpark) must be founded below the zone of influence so that excavation of the pipe or culvert can be undertaken without affecting the structures. The Construction Certificate plans must demonstrate compliance with this requirement.
60. The building construction adjacent to the reconstructed pipeline / culvert and associated easement should be pierced to below the zone of influence and suitably designed to avoid damage due to access to the reconstructed pipe / culvert. The Construction Certificate plans must demonstrate compliance with this requirement.
61. The footings of any structures located adjacent to the reconstructed or existing Council or Sydney Water controlled stormwater drainage line must be founded on rock, or extend below a 30 degrees line taken from the level of the pipe invert either at the edge of the easement (angle of repose) or to Council's satisfaction (where there is no easement over the reconstructed drainage pipeline). The building works must be inspected by the applicant's engineer to ensure that these footings and/or piers extend below the "angle of repose" and documentary evidence of compliance is to be submitted to Council, prior to proceeding to the subsequent stages of construction. Note: all footings must be located clear of the drainage easement.
62. Prior to an occupation certificate being issued for the development, the applicant shall submit to Council, and have approved, CCTV videos of the reconstructed Council or Sydney Water stormwater pipeline located along the northern and eastern site boundaries. Such CCTV shall inspect the stormwater pipe for any post construction damage.
63. There shall be no movement of construction machinery within the proposed drainage easement following reconstruction of the pipeline. Building materials shall not be stored within the proposed drainage easement and no deliveries of materials shall be made via the proposed easement.
64. All footings in the vicinity of the proposed drainage easement shall be suitably designed to ensure that they will not be adversely affected by stormwater/floodwater. The Construction Certificate application must demonstrate compliance with this requirement.
65. Any new fencing / gates located across the proposed drainage easement must be of a free and open form and must not impede or redirect the movement of stormwater flow. The Construction Certificate plans must demonstrate compliance with this requirement.

Stormwater Drainage & Flood Management

Protection of openings and Drainage System Design

66. The floor level of all habitable, retail, commercial and storage areas (excluding those in the basement carpark) shall be at a minimum 500mm above the critical

1 in 100 year ARI flood level **as determined and issued by Council**, or be suitably waterproofed up to these same levels. The applicant must obtain the detailed 1 in 100 year ARI (1%AEP) flood levels for this development site from Council's Development Engineer Coordinator prior to preparing construction certificate plans. Details demonstrating compliance with this condition are to be included in the construction certificate documentation.

67. The proposed internal driveway shall be designed with a high point at least 300 mm above determined 1 in 100 year ARI (1%AEP) flood level. Details demonstrating compliance with this condition are to be included in the construction certificate documentation.
68. Windows, vents and other openings into the basement carpark (excluding the driveway opening) are to be located at least 500 mm above the determined 1 in 100 years ARI (1%AEP) flood level. Details demonstrating compliance with this condition are to be included in the construction certificate documentation.
69. The ground floor level shall be designed to *structurally* withstand hydrostatic pressure/stormwater inundation from floodwater during the probable maximum flood (PMF) event as defined in the Floodplain Management Manual (New South Wales Government, January 2001). Structural Engineering certification confirming that this condition has been complied with shall be submitted to the certifying authority with the construction certificate.

This requirement does not necessitate the development being flood proof/water tight up to the PMF event, rather the requirement is to ensure that the development will not be *structurally* damaged in manner that could endanger lives during the PMF event.

70. The building, including building footings, is to be designed to ensure that they will not be adversely affected by stormwater, floodwater and/or the water table.

All proposed footings located adjacent to drainage easements shall either be:

- A. Founded on rock, or;
- B. Extended below a 30 degree line taken from the level of the pipe invert at the edge of the drainage reserve/easement (angle of repose).

Structural details demonstrating compliance with this condition shall be submitted with the construction certificate application.

The footings must be inspected by the applicant's engineer to ensure that these footings are either founded on rock or extend below the "angle of repose". Documentary evidence of compliance with this condition is to be submitted to the certifying authority prior to proceeding to the subsequent stages of construction.

71. **Stormwater drainage plans have not been approved as part of this development consent.** Engineering calculations and plans with levels reduced to Australian Height Datum in relation to site drainage shall be prepared by a suitably qualified Hydraulic Engineer and submitted to and approved by the certifying authority prior to a construction certificate being issued for the development. A copy of the engineering calculations and plans are to be forwarded to Council, prior to a construction certificate being issued, if the Council is not the certifying authority. The drawings and details shall include the following information:

- a) A detailed drainage design supported by a catchment area plan, at a scale of 1:100 or as considered acceptable to the Council or an accredited certifier, and drainage calculations prepared in accordance with the Institution of Engineers publication, Australian Rainfall and Run-off, 1987 edition.
- b) A layout of the proposed drainage system including pipe sizes, type, grade, length, and invert levels, etc., dimensions and types of all drainage pipes and the connection into Council's stormwater system.
- c) The separate catchment areas within the site, draining to each collection point or surface pit are to be classified into the following categories:
 - i. Roof areas
 - ii. Paved areas
 - iii. Grassed areas
 - iv. Garden areas
- e) Where buildings abut higher buildings and their roofs are "flushed in" to the higher wall, the area contributing must be taken as: the projected roof area of the lower building, plus one half of the area of the vertical wall abutting, for the purpose of determining the discharge from the lower roof.
- f) Proposed finished surface levels and grades of car parks, internal driveways and access aisles which are to be related to Council's design alignment levels.
- g) The details of any special features that will affect the drainage design eg. the nature of the soil in the site and/or the presence of rock etc.

External Drainage

72. The written approval of Council is required to be obtained in relation to all drainage and infrastructure works which are located externally from the site within the road reserve/public place, in accordance with the requirements of the *Roads Act 1993*. Detailed plans and specifications of the proposed works are to be submitted to and approved by the Director of City Services prior to commencing any works within the road reserve/public place.

All works within the road reserve/public place must be carried out to the satisfaction of Council and certification from a professional engineer is to be provided to Council upon completion of the works.

Relevant Council Assessment and Inspection fees, as specified in Council's adopted Pricing Policy, are required to be paid to Council prior to commencement of the works.

Internal Drainage

73. The site stormwater drainage system is to be provided in accordance with the following requirements;

- a) The stormwater drainage system must be provided in accordance with the relevant requirements of Building Code of Australia and the conditions of this consent, to the satisfaction of the *Certifying Authority* and details are to be included in the construction certificate.

- b) The stormwater must be discharged (by gravity) either directly into Council's underground drainage system located in Doncaster Avenue via a new pit and new pipeline; or into the proposed reconstructed drainage pipeline / culvert located within the development site.
- c) An on-site stormwater detention system must be provided to ensure that the maximum discharge from the site does not exceed that which would occur during a **1 in 10** year storm of one hour duration for existing site conditions. All other stormwater run-off from the site for all storms up to the 1 in 20 year storm is to be retained on the site for gradual release to the street drainage system, to the satisfaction of the certifying authority.

An overland escape route or overflow system (to Council's street drainage system) must be provided for storms having an average recurrence interval of 100 years (1 in 100 year storm), or, alternatively the stormwater detention system is to be provided to accommodate the 1 in 100 year storm.

- d) Should stormwater be discharged to an infiltration system, the infiltration area shall be sized for all storm events up to the 1 in 20 year storm event with provision for a formal overland flow path to Council's Street drainage system.

Should no formal overland escape route be provided for storms greater than the 1 in 20 design storm, the infiltration system shall be sized for the 1 in 100 year storm event.

- e) Determination of the required cumulative storage (in the on-site detention and/or infiltration system) must be calculated by the mass curve technique as detailed in Technical Note 1, Chapter 14 of the Australian Rainfall and Run-off Volume 1, 1987 Edition.

Where possible any detention tanks should have an open base to infiltrate stormwater into the ground. Infiltration should not be used if ground water and/or any rock stratum is within 2.0 metres of the base of the tank.

- f) Should a pump system be required to drain any portion of the site the system must be designed with a minimum of two pumps being installed, connected in parallel (with each pump capable of discharging at the permissible discharge rate) and connected to a control board so that each pump will operate alternatively. The pump wet well shall be sized for the 1 in 100 year, 2 hour storm assuming both pumps are not working.

The pump system must also be designed and installed strictly in accordance with Randwick City Council's Private Stormwater Code.

- g) If connecting to Council's underground drainage system, a reflux valve shall be provided (within the site) over the pipeline discharging from the site to ensure that stormwater from Council drainage system does not surcharge back into the site stormwater system.
- h) Any new kerb inlet pits (constructed within Council's road reserve) are to be constructed generally in accordance with Council's standard detail for the design of kerb inlet pits (drawing number SD6 which is available from Council).

- i) Generally all internal pipelines must be capable of discharging a 1 in 20 year storm flow. However the minimum pipe size for pipes that accept stormwater from a surface inlet pit must be 150mm diameter. The site must be graded to direct any surplus run-off (i.e. above the 1 in 20 year storm) to the proposed drainage (detention/infiltration) system.
- j) A sediment/silt arrestor pit must be provided within the site near the street boundary prior to discharge of the stormwater to Council's drainage system and prior to discharging the stormwater to any absorption/infiltration system.

Sediment/silt arrestor pits are to be constructed generally in accordance with the following requirements:

- The base of the pit being located a minimum 300mm under the invert level of the outlet pipe.
- The pit being constructed from cast in-situ concrete, precast concrete or double brick.
- A minimum of 4 x 90 mm diameter weep holes (or equivalent) located in the walls of the pit at the floor level with a suitable geotextile material with a high filtration rating located over the weep holes.
- A galvanised heavy-duty screen being provided over the outlet pipe/s (Mascot GMS multipurpose filter screen or equivalent).
- The grate being a galvanised heavy-duty grate that has a provision for a child proof fastening system.
- A child proof and corrosion resistant fastening system being provided for the access grate (e.g. spring loaded j-bolts or similar).
- Provision of a sign adjacent to the pit stating, "This sediment/silt arrestor pit shall be regularly inspected and cleaned".

Sketch details of a standard sediment/silt arrestor pit may be obtained from Council's Drainage Engineer.

- k) The floor level of all habitable, retail, commercial and storage areas located adjacent to any detention and/or infiltration systems with above ground storage must be a minimum of 300mm above the maximum water level for the design storm or alternately a permanent 300mm high water proof barrier is to be provided.

(In this regard, it must be noted that this condition must not result in any increase in the heights or levels of the building. Any variations to the heights or levels of the building will require new or amended development consent from the Council prior to a construction certificate being issued for the development).

- l) Any proposed infiltration system must be designed and constructed generally in accordance with Randwick City Council's Private Stormwater Code.
- m) The maximum depth of ponding in any above ground detention areas and/or infiltration systems with above ground storage shall be as follows (as applicable):
 - i. 150mm in uncovered open car parking areas (with an isolated maximum depth of 200mm permissible at the low point pit within the detention area)

- ii. 300mm in landscaped areas (where child proof fencing is not provided around the outside of the detention area and sides slopes are steeper than 1 in 10)
- iii. 600mm in landscaped areas where the side slopes of the detention area have a maximum grade of 1 in 10
- iv. 1200mm in landscaped areas where a safety fence is provided around the outside of the detention area
- v. Above ground stormwater detention areas must be suitably signposted where required, warning people of the maximum flood level.

Note: Above ground storage of stormwater is not permitted within basement car parks or store rooms.

- n) A childproof and corrosion resistant fastening system shall be installed on access grates over pits/trenches where water is permitted to be temporarily stored.
- o) A 'V' drain (or equally effective provisions) are to be provided to the perimeter of the property, where necessary, to direct all stormwater to the detention/infiltration area. Mulch or bark is not to be used in on-site detention areas.
- p) Site discharge pipelines shall cross the verge at an angle no less than 45 degrees to the kerb line and must not encroach across a neighbouring property's frontage unless approved in writing by Council's Development Engineering Coordinator.
- q) Any onsite detention/infiltration systems shall be located in areas to be dedicated as common property and/or areas accessible by residents of all units.
- r) Should a charged system be required to drain any portion of the site, the charged system must be designed with suitable clear-outs/inspection points at pipe bends and junctions.

Groundwater and Dewatering

74. As the proposed basement level/s will extend into the water table (or be affected by fluctuations of the water table), the following requirements apply:

- a. The design and construction of the basement level/s must preclude the need for dewatering after construction.

That part of the development that may be impacted by the water table must include a water proof retention system (i.e. a fully tanked structure) with adequate provision for future fluctuations of water table levels. (It is recommended that a minimum allowance for a water table variation of at least +/-1.0 metre beyond any expected fluctuation be provided). The actual water table fluctuation and fluctuation safety margin must be determined by a suitably qualified professional.

- b. Groundwater management systems shall be designed to transfer groundwater around, through or under the proposed development without a change in the range of the natural groundwater level fluctuations in the locality.

Where an impediment to the natural flowpaths is created as a result of the nature of the construction methods utilised or the bulk of the below-ground

structure, artificial drains such as perimeter drains and through drainage may be utilised. These systems may only be utilised where it can be demonstrated that the natural groundwater flow regime is restored both up-gradient and down-gradient of the site, without any adverse effects on surrounding property or infrastructure.

Groundwater management systems:

- Are to be designed to be easily maintained.
- Should have a design life of 100 years.

- c. The basement level/s of the building must be designed by a structural engineer who is qualified and experienced in the design of structures below a water table. Details of the proposed methods of managing groundwater, tanking and waterproofing must be submitted to and approved by the certifying authority, prior to issuing the **construction certificate**. A copy of the engineer's qualifications and experience must also be submitted to the Certifying Authority.

In the event of the development being modified in a manner that changes building/structural loads or alters the basement design, a suitably qualified and experienced structural engineer must certify that the design of the basement remains adequate for the site conditions.

75. Prior to the issue of a construction certificate, a report must be submitted to and approved by the Certifying Authority, detailing the proposed methods of excavation (including support), managing groundwater and dewatering the site.

The report is to be prepared by a suitably qualified and experienced Geotechnical and/or Hydrogeological Engineer and include:

- a. Details of compliance with relevant approvals and licences (e.g. Council's conditions of consent and approval from NSW DPI - Water.
- b. The proposed method of excavation, shoring/piling and dewatering.
- c. Assessment of the potential risk of off-site impacts such as damage to surrounding buildings or infrastructure due to differential sediment compaction and surface settlement during and following pumping of groundwater. *Note: The assessment must demonstrate that the proposed method of excavation and dewatering will not pose an unacceptable risk of damage.*
- d. The zone of any possible settlement.
- e. Details of the proposed temporary disposal of groundwater and/or construction site stormwater to Council's drainage system. *Note: Prior to discharging groundwater (or site stormwater) into Council's stormwater drainage system, separate written approval must be obtained from Council in accordance with Section 138 of the Roads Act 1993.*
- f. The location of any proposed re-injection points in relation to the property boundaries (where re-injection equipment is to be located on land other than the subject premises, the written consent of the owner must also be provided to Council).
- g. Details of groundwater quality and proposed disposal of any potentially contaminated groundwater in an environmentally sensitive manner. The

details must demonstrate compliance with relevant requirements and approvals of the Office of Environment & Heritage, Council and the Protection of the Environment Operations Act 1997.

- h. The program to monitor fluctuations of the water table during dewatering/ construction to ensure that the conditions of consent and other relevant requirements are satisfied.
- i. The location of all proposed monitoring and pumping equipment in relation to the property boundaries (where monitoring or pumping equipment is to be located on land other than the subject premises, the written consent of the owner must also be provided to Council).
- j. Details of any consultation and arrangements made with owners of any potentially affected nearby premises (i.e. in relation to access, monitoring and rectification of possible damage to other premises)
- k. Certification that the proposed methods of dewatering and excavation are:
 - appropriate and in accordance with 'best practice' principles; and
 - should not result in any unacceptable levels of settlement or damage of the adjoining or nearby buildings within the zone of influence.

A copy of the approved report must be submitted to Council, (for Council's record keeping purposes and as confirmation that this condition has been complied with), prior to the commencement of any site construction works.

Any practices or recommendations made by the consulting engineer/s in the approved report must be implemented accordingly and the dewatering process must be monitored by the consulting engineer/s to the satisfaction of the Principal Certifying Authority.

76. The proposed operation of all plant and equipment shall not give rise to an 'offensive noise' as defined in the Protection of the Environment Operations Act 1997 and Regulations.

In this regard, the noise from the pumps shall not be more than 5dB (A) greater than the A – weighted L90 background sound pressure level between the hours of 7am to 10pm within any residential premises and not to be audible at all between the hours of 10pm and 7am within any residential dwelling.

77. Prior to lodgement of a Construction Certificate application the applicant must obtain from the NSW Department of Primary Industries – Water (NSW DPI-Water), the general terms of approval and any specific requirements for dewatering of the site to facilitate construction of the basement carpark levels. In particular, the applicant must obtain in writing the Department's general terms of approval provided to Council on 15 February 2016, (NSW DPI - Water reference 10ERM2015/1275). A copy of the general Terms of Approval must be submitted to the Certifying Authority prior to the issuing of a Construction Certificate.

The Construction Certificate application must demonstrate compliance with the general terms of approval. No construction certificate is to be issued until such time as the applicant demonstrates to the satisfaction of the NSW Department of Primary Industries - Water and the Certifying Authority that the proposed method for construction of the basement carpark and dewatering of the site is strictly in accordance with the NSW Department of Primary Industries – Water's requirements and best current engineering practice.

No dewatering of the site shall take place until such time as the applicant has received authorization from the NSW DPI – Water under the Water Management Act 2000. A copy of the authorisation must be forwarded to Council prior to the commencement of any dewatering on the site. A valid current authorisation from the NSW DPI - Water must be in place at all times to carry out dewatering activities, and all conditions and requirements of the NSW DPI - Water must be complied with at all times.

78. Details of the proposed connection and or disposal of any groundwater (i.e. during construction) or construction site stormwater to Council's stormwater drainage system must be submitted to and approved by Council's Development Engineer, prior to commencing these works, in accordance with section 138 of the *Roads Act 1993*.

Details must include the following information:

- Site plan
- Hydraulic engineering details of the proposed disposal/connection of groundwater or site stormwater to Council/s drainage system
- Volume of water to be discharged
- Location and size of drainage pipes
- Duration, dates and time/s for the proposed works and disposal
- Details of water quality and compliance with the requirements of the *Protection of the Environment Act 1997*
- Details of associated plant and equipment, including noise levels from the plant and equipment and compliance with the requirements of the *Protection of the Environment Act 1997* and associated Regulations and Guidelines
- Copy of any required approvals and licences from other Authorities (e.g. approvals from NSW DPI - Water).
- Details of compliance with any relevant approvals and licences

Waste Management

79. A Waste Management Plan detailing the waste and recycling storage and removal strategy for all of the development, is required to be submitted to and approved by Council's Director of City Planning.

The Waste Management plan is required to be prepared in accordance with Council's Waste Management Guidelines for Proposed Development and must include the following details (as applicable):

- The use of the premises and the number and size of occupancies.
- The type and quantity of waste to be generated by the development.
- Demolition and construction waste, including materials to be re-used or recycled.
- Details of the proposed recycling and waste disposal contractors.
- Waste storage facilities and equipment.
- Access and traffic arrangements.
- The procedures and arrangements for on-going waste management including collection, storage and removal of waste and recycling of materials.

Further details of Council's requirements and guidelines, including pro-forma Waste Management plan forms can be obtained from Council's Customer Service Centre.

80. Garbage room/s shall be sized to contain 50 x 240 litre bins (23 general waste bins, 23 recycle bins and 4 green waste bins) with adequate provisions for access to all of the bins. Details showing compliance are to be included in the construction certificate. Council would support the use of a compactor system to reduce the number of residential bins conditional upon the compactor being managed by a caretaker and the compactor is to be located in an area that is not readily accessible by residents.
81. The waste storage areas are to be provided with a tap and hose and the floor is to be graded and drained to the sewer to the requirements of Sydney Water.

Street Tree Management

82. The applicant must submit a payment of **\$1,177.00 (including GST)**, to cover the following costs:
- a. For Council to remove, stump-grind and dispose of the existing *Lophostemon confertus* (Brush Box, Tree 48 in the Arborists Report) from the Doncaster Avenue footpath, in line with the northern site boundary, so as to accommodate works associated with the new major stormwater pipeline in this same area;
 - b. For Council to supply, install and maintain 4 x 25 litre street trees, *Schinus areira* (Peppercorn Trees) within dedicated tree squares back on the Doncaster Avenue footpath, being three spaced evenly between the northern site boundary and the existing/remaining street tree in front of no.4-8, then one spaced evenly between this tree and the northern edge of the new vehicle crossing.

NOTE: THE NEW FULL-WIDTH PUBLIC FOOTPATH WILL NEED TO MAKE ALLOWANCES FOR THE FUTURE PLANTING OF THESE NEW TREES BY PROVIDING INDIVIDUAL TREE SQUARES AT THE BACK OF THE KERB. REFER ALSO TO CIVIL WORKS CONDITIONS LATER IN THIS REPORT.

This fee must be paid into **Tree Amenity Income** at the Cashier on the Ground Floor of the Administrative Centre **prior to a Construction Certificate being issued for the development.**

The applicant must contact Council's Landscape Development Officer on 9399-0613 (quoting the receipt number), and giving at least four working weeks' notice (allow longer for public holidays or extended periods of rain) to arrange for removal of the street tree prior to the commencement of site works, as well as upon completion, to arrange for planting of the replacements.

Street Tree Protection Measures

83. In order to ensure retention of the five *Schinus areira* (Peppercorn Trees) located on Council's Doncaster Avenue footpath across the full width of the site, being one centrally in front of no.4-8 (T47); two others further to the south, being one each in front of both no.10 (T1) and no.12 (T2), one in front of no.14-16 (T49) and one in front of the vacant block at no.18 (T50) in good health, the following measures are to be undertaken:
- a. All documentation submitted for the Construction Certificate application must show their retention, with the position and diameter of both their trunks and canopies to be clearly and accurately shown on all plans in relation to the proposed works.

- b. Any excavations associated with the installation of new services, pipes, stormwater systems or similar over public property along this frontage must be setback a minimum distance of **2 metres** from their trunks, with all hydraulic and services plans to demonstrate compliance with this requirement.
- c. Prior to the commencement of any site works, the trunk of each tree is to be physically protected by layers of geo-textile, underfelt or Hessian, which shall be wrapped from ground level to the underside of their crowns/ 2m above ground level, to which, 2m lengths of 50mm x 100mm hardwood timbers, spaced at 150mm centres shall be placed around their circumference, and are to be secured by 8 gauge wires or steel strapping at 300mm spacing. NO nailing to the trunk.
- d. This protection measure is to be installed prior to the commencement of demolition and construction works and must remain in place until all works are completed, to which, signage containing the following words shall be clearly displayed and permanently attached: "TREE PROTECTION ZONE (TPZ), DO NOT REMOVE/ENTER".
- e. The applicant is not authorised to perform any works to these public trees, and must contact Council's Landscape Development Officer on 9399-0613 should pruning or any similar such work appear necessary, and can only be performed by Council, with all costs to be paid wholly by the applicant, prior to the issue of any Occupation Certificate.
- f. There is to be no storage of materials, machinery or site office/sheds, nor is cement to be mixed or chemicals spilt/disposed of and no stockpiling of soil or rubble around or near their trunks, with all Site Management Plans needing to acknowledge these requirements.
- g. Where roots are encountered which are in direct conflict with the approved external civil works and they need to be pruned, they may be cut cleanly by hand (using only hand held tools, not machinery), with the affected area/s to be backfilled with clean site soil as soon as practically possible. Roots must not be left exposed to the atmosphere
- h. The PCA must ensure compliance with these requirements on-site during the course of construction, and prior to issuing any type of Occupation Certificate.
- i. A refundable deposit in the form of cash, credit card or cheque for an amount of **\$3,500.00** must be paid at the Cashier on the Ground Floor of the Administrative Centre, **prior to a Construction Certificate being issued for the development**, in order to ensure compliance with the conditions listed in this consent, and ultimately, preservation of the trees.

The refundable deposit will be eligible for refund following the issue of an Occupation Certificate, subject to completion and submission of Council's 'Security Deposit Refund Application Form', and pending a satisfactory inspection by Council's Landscape Development Officer (9399-0613).

Any contravention of Council's conditions relating to the trees at any time during the course of the works, or prior to the issue of an Occupation Certificate, may result in Council claiming all or part of the lodged security in order to perform any rectification works necessary, as per the requirements of 80A (6) of the Environmental Planning and Assessment Act 1979.

Protection of tree within site

84. In order to ensure retention of the large, mature and significant *Eucalyptus saligna* (Sydney Blue Gum, Tree 42) located towards the northwest corner of the site in good health, the following measures are to be undertaken:
- a. All documentation submitted for the Construction Certificate application must show its retention, with the position and diameter of both its trunk, canopy and tree number to be clearly and accurately shown on all plans in relation to all proposed works.
 - b. Prior to the commencement of any site works, the Certifying Authority/PCA must ensure that an AQF Level V Arborist ('the site Arborist'), who is a registered member of a nationally recognized organization/association, has been engaged for the duration of the project to implement, monitor and perform any works associated with complying with the conditions of development consent, as well as any recommendations contained in the Construction Impact Assessment & Management Plan by George Palmer, dated December 2015 and stamped by Council 24 December 2015 ('the Arborists Report').
 - c. The site Arborist must be present on-site at the relevant stages of works, and must keep a log of the dates of attendance and the works performed, as per the hold points detailed in point 1.1 of the Arborists Report, with a Final Compliance Report to be submitted to the PCA, prior to the issue of any Occupation Certificate.
 - d. In the event of any discrepancy between the Arborists Report and the conditions of consent, the site Arborist must contact Council's Landscape Development Officer on 9399-0613 to reach agreement on the outcome, before proceeding further with any works.
 - e. The western wall of the rev 07 Basement Level, for a radius of 12 metres (measured from the centre of its trunk), must be constructed using a system such as sheet piling, contiguous bored piers or a similar alternative method that will not require bulk earthworks and excavations to the west of the finished location of the basement wall, with details confirming compliance to be provided.
 - f. The Construction Certificate plans must show that the new major stormwater pipeline will be located hard up against the northern site boundary, as is shown on the North Side Deviation Concept Plan by Sydney Water, case no 142158SW, dated 16/12/15.
 - g. The Construction Certificate plans must include measurements confirming that the western wall of the Basement Level will be offset a minimum distance of **5900mm** from the centre of its trunk, as has been shown on the Basement Plan by SJB Architects, dwg DA-0201, revision 07, dated 10.06.16.
 - h. The ramped walkway to its east, as is shown on the current Landscape Plan 1 & Ground Floor architectural Plan, must be an entirely elevated and permeable structure, that is supported on localized pad footings only, using a flexible system which can allow footings to be placed around any roots that need to be preserved, with details confirming compliance to be provided.
 - i. Ground levels in the area bounded by the western wall of the basement,

- the northern site boundary, and the northern side of the proposed pedestrian entrance (to the south of its trunk), must be maintained as existing, with no other structures such as continuous strip footings, planter boxes or similar to be located in this area, which must remain as undisturbed, deep soil.
- j. Other than works associated directly with the approved major stormwater pipe along the northern site boundary; the basement level and the cantilevered walkway, there can be no excavations associated with the installation of any other new services, pipes, stormwater systems or similar in the area that is described in point 'i' above.
 - k. The site Arborist must be present on-site during all initial excavations for any works in the area described in point 'i' above, being for the western wall of the basement; footings for the wall along the northern side of the pedestrian access/lobby, as well as for footings for the ramped walkway.
 - l. Where roots with a diameter of 75mm or more are encountered during footings for the ramped walkway, which the site Arborist determines must be retained, these footings will need to be relocated to an alternative position to allow their preservation.
 - m. Where roots with a diameter of less than 75mm are encountered, which are in direct conflict with the approved works, they may be cut cleanly by hand, only by the site Arborist, using only hand held tools, with the affected area to be backfilled with clean site soil as soon as practically possible.
 - n. This tree is to be physically protected by the installation of 1.8 metre high steel mesh/chainwire fencing, which match up with the southern edge of the major stormwater pipe along the northern site boundary, the western wall of the basement level, the northern side of the pedestrian access/lobby to its south, and matching up with the front (western) property boundary, in order to completely enclose this tree for the duration of works.
 - o. This fencing shall be installed prior to the commencement of demolition and construction works and shall remain in place until all works are completed, to which, signage containing the following words shall be clearly displayed and permanently attached: "TREE PROTECTION ZONE (TPZ), DO NOT REMOVE/ENTER".
 - p. Ground protection comprising a 50mm layer of woodchip mulch, to which, strapped together rumble boards, plywood or similar shall be provided on top, must be provided for the TPZ area described in point 'n' above, and must remain in place for the duration of works, until such time as the elevated walkway and landscape works are being installed in this area.
 - q. Within the TPZ, there is to be no storage of materials, machinery or site office/sheds, nor is cement to be mixed or chemicals spilt/disposed of and no stockpiling of soil or rubble, with all Site Management Plans needing to acknowledge these requirements.
 - r. In order to prevent soil/sediment being washed over its root system, erosion control measures must be provided around the perimeter of the TPZ.
 - s. The PCA must ensure compliance with these requirements on-site during

the course of construction, and prior to issuing any type of Occupation Certificate.

Site stability, Excavation and Construction work

85. A report must be obtained from a suitably qualified and experienced *professional* engineer, which includes the following details, to the satisfaction of the Certifying Authority for the development:-
- a) Geotechnical details which confirm the suitability and stability of the site for the development and relevant design and construction requirements to be implemented to ensure the stability and adequacy of the development and adjacent land.
 - b) Details of the proposed methods of excavation and support for the adjoining land (including any public place) and buildings.
 - c) Details to demonstrate that the proposed methods of excavation, support and construction are suitable for the site and should not result in any damage to the adjoining premises, buildings or any public place, as a result of the works and any associated vibration.

BASIX Requirements

86. In accordance with section 80A(11) of the *Environmental Planning & Assessment Act 1979* and clause 97A of the *Environmental Planning & Assessment Regulation 2000*, the requirements and commitments contained in the relevant BASIX Certificate must be complied with.

The required commitments listed and identified in the BASIX Certificate must be included on the construction certificate plans, specifications and associated documentation, to the satisfaction of the Certifying Authority.

The design of the building must not be inconsistent with the development consent and any proposed variations to the building to achieve the BASIX commitments may necessitate a new development consent or amendment to the existing consent to be obtained, prior to a construction certificate being issued.

REQUIREMENTS PRIOR TO THE COMMENCEMENT OF ANY WORKS

The following conditions of consent must be complied with prior to the commencement of any works on the site. The necessary documentation and information must be provided to the Council or the 'Principal Certifying Authority' (PCA), as applicable.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000* and to provide reasonable levels of public health, safety and environmental amenity.

Certification, PCA & other Requirements

87. Prior to the commencement of any building works, the following requirements must be complied with:

- a) a *Construction Certificate* must be obtained from the Council or an accredited certifier, in accordance with the provisions of the *Environmental Planning & Assessment Act 1979*.

A copy of the construction certificate, the approved development consent plans and consent conditions must be kept on the site at all times and be

made available to the Council officers and all building contractors for assessment.

- b) a *Principal Certifying Authority* (PCA) must be appointed to carry out the necessary building inspections and to issue an *occupation certificate*; and
- c) a *principal contractor* must be appointed for the building work, or in relation to residential building work, an *owner-builder* permit may be obtained in accordance with the requirements of the *Home Building Act 1989*, and the PCA and Council are to be notified accordingly; and
- d) the *principal contractor* must be advised of the required *critical stage inspections* and other inspections to be carried out, as specified by the *Principal Certifying Authority*; and
- e) at least two days' notice must be given to the Council, in writing, prior to commencing any works.

In relation to residential building work, the principal contractor must be the holder of a contractor licence, in accordance with the provisions of the Home Building Act 1989.

88. The building works must be inspected by the *Principal Certifying Authority*, in accordance with sections 109 E (3) of the *Environmental Planning & Assessment Act 1979* and clause 162A of the *Environmental Planning & Assessment Regulation 2000*, to monitor compliance with the relevant standards of construction, Council's development consent and the construction certificate.

The *Principal Certifying Authority* must specify the relevant stages of construction to be inspected and a satisfactory inspection must be carried out, to the satisfaction of the *Principal Certifying Authority*, prior to proceeding to the subsequent stages of construction or finalisation of the works (as applicable).

(All building and demolition work, except internal works only)
Home Building Act 1989

89. In accordance with section 80 A (11) of the *Environmental Planning & Assessment Act 1979* and clause 98 of the *Environmental Planning & Assessment Regulation 2000*, the requirements of the *Home Building Act 1989* must be complied with.

Details of the Licensed Building Contractor and a copy of the relevant Certificate of Home Warranty Insurance or a copy of the Owner-Builder Permit (as applicable) must be provided to the Principal Certifying Authority and Council.

Dilapidation Reports

90. A dilapidation report prepared by a professional engineer, building surveyor or other suitably qualified independent person must be submitted to the satisfaction of the Principal Certifying Authority prior to commencement of any demolition, excavation or building works, in the following cases:

- excavations for new dwellings, additions to dwellings, swimming pools or the like which are proposed to be located within the *zone of influence* of the footings of any dwelling, associated garage or other substantial structure located upon an adjoining premises,
- new dwellings or additions to dwellings sited up to shared property boundaries (e.g. additions to a semi-detached dwelling or terraced dwellings),

- excavations for new dwellings, additions to dwellings, swimming pools or the like which are within rock and may result in vibration and or potential damage to any dwelling, associated garage or other substantial structure located upon an adjoining premises,
- as otherwise may be required by the Principal Certifying Authority.

The report (including photographs) are required to detail the current condition and status of any dwelling, associated garage or other substantial structure located upon the adjoining premises, which may be affected by the subject works. A copy of the dilapidation report is to be given to the owners of the premises encompassed in the report/s before commencing any works.

Construction Noise & Vibration Management Plan

91. Noise and vibration emissions during the construction of the building and associated site works must not result in damage to nearby premises or result in an unreasonable loss of amenity to nearby residents and the relevant requirements of the *Protection of the Environment Operations Act 1997* and NSW EPA Guidelines must be satisfied at all times.

Noise and vibration from any rock excavation machinery, pile drivers and all plant and equipment must be minimised, by using appropriate plant and equipment, silencers and the implementation of noise management strategies.

A *Construction Noise Management Plan*, prepared in accordance with the NSW EPA Construction Noise Guideline by a suitably qualified person, is to be implemented throughout the works. A copy of the strategy must be provided to the Principal Certifying Authority and Council prior to the commencement of works on site.

Construction Site Management Plan

92. A *Construction Site Management Plan* must be developed and implemented prior to the commencement of any works. The construction site management plan must include the following measures, as applicable to the type of development:

- location and construction of protective fencing / hoardings to the perimeter of the site;
- location of site storage areas/sheds/equipment;
- location of building materials for construction;
- provisions for public safety;
- dust control measures;
- site access location and construction
- details of methods of disposal of demolition materials;
- protective measures for tree preservation;
- provisions for temporary sanitary facilities;
- location and size of waste containers/bulk bins;
- details of proposed sediment and erosion control measures;
- provisions for temporary stormwater drainage;
- construction noise and vibration management;
- construction traffic management details.

The site management measures must be implemented prior to the commencement of any site works and be maintained throughout the works, to the satisfaction of Council.

A copy of the Construction Site Management Plan must be provided to the Principal Certifying Authority and Council prior to commencing site works. A copy

must also be maintained on site and be made available to Council officers upon request.

Demolition Work Plan

93. A Demolition Work Plan must be prepared for the development in accordance with Australian Standard AS2601-2001, Demolition of Structures and relevant environmental/occupational health and safety requirements.

The Demolition Work Plan must include the following information (as applicable):

- The name, address, contact details and licence number of the Demolisher /Asbestos Removal Contractor
- Details of hazardous materials (including asbestos)
- Method/s of demolition (including removal of any asbestos)
- Measures and processes to be implemented to ensure the health & safety of workers and community
- Measures to be implemented to minimise any airborne dust and asbestos
- Methods and location of disposal of any hazardous materials (including asbestos)
- Other relevant details, measures and requirements to be implemented
- Details of re-use, recycling and disposal of waste demolition/building materials
- Date the demolition works will commence

The Demolition Work Plan must be submitted to the Principal Certifying Authority (PCA), not less than two (2) working days before commencing any demolition work. A copy of the Demolition Work Plan must be maintained on site and be made available to Council officers upon request.

If the work involves asbestos products or materials, a copy of the Demolition Work Plan must also be provided to Council not less than 2 days before commencing those works.

Notes

- *It is the responsibility of the persons undertaking demolition work to obtain the relevant WorkCover licences and permits.*
- *Refer to the conditions within the "Requirements During Construction & Site Work", for further details and requirements relating to demolition work, removal of any asbestos and public safety.*

Public Utilities

94. A *Public Utility Impact Assessment* must be carried out to identify all public utility services located on the site, roadway, nature strip, footpath, public reserve or any public areas associated with and/or adjacent to the building works.

Documentary evidence from the relevant public utility authorities confirming that their requirements have been or are able to be satisfied, must be submitted to the Principal Certifying Authority prior to the commencement of any works.

The owner/builder must make the necessary arrangements and meet the full cost for telecommunication companies, gas providers, Ausgrid, Sydney Water and other authorities to adjust, repair or relocate their services as required.

Public Liability

95. The owner/builder is required to hold Public Liability Insurance, with a minimum liability of \$10 million and a copy of the Insurance cover is to be provided to the Principal Certifying Authority and Council.

Construction Traffic Management

96. An application for a 'Works Zone' and Construction Traffic Management Plan must be submitted to Councils Integrated Transport Department, and approved by the Randwick Traffic Committee, for a 'Works Zone' to be provided in Doncaster Avenue for the duration of the demolition & construction works.

The 'Works Zone' must have a minimum length of 12m and extend for a minimum duration of three months. The suitability of the proposed length and duration is to be demonstrated in the application for the Works Zone. The application for the Works Zone must be submitted to Council at least six (6) weeks prior to the commencement of work on the site to allow for assessment and tabling of agenda for the Randwick Traffic Committee.

The requirement for a Works Zone may be varied or waived only if it can be demonstrated in the Construction Traffic Management Plan (to the satisfaction of Council's Traffic Engineers) that all construction related activities (including all loading and unloading operations) can and will be undertaken wholly within the site. The written approval of Council must be obtained to provide a Works Zone or to waive the requirement to provide a Works Zone prior to the commencement of any site work.

97. A detailed Construction Site Traffic Management Plan must be submitted to and approved by Council, prior to the commencement of any site work.

The Construction Site Traffic Management Plan must be prepared by a suitably qualified person and must include the following details, to the satisfaction of Council:

- A description of the demolition, excavation and construction works
- A site plan/s showing the site, roads, footpaths, site access points and vehicular movements
- Any proposed road and/or footpath closures
- Proposed site access locations for personnel, deliveries and materials
- Size, type and estimated number of vehicular movements (including removal of excavated materials, delivery of materials and concrete to the site)
- Provision for loading and unloading of goods and materials
- Impacts of the work and vehicular movements on the road network, traffic and pedestrians
- Proposed hours of construction related activities and vehicular movements to and from the site
- Current/proposed approvals from other Agencies and Authorities (including NSW Roads & Maritime Services, Police and State Transit Authority)
- Any activities proposed to be located or impact upon Council's road, footways or any public place
- Measures to maintain public safety and convenience

The approved Construction Site Traffic Management Plan must be complied with at all times, and any proposed amendments to the approved Construction Site Traffic Management Plan must be submitted to and be approved by Council in writing, prior to the implementation of any variations to the Plan.

98. Any necessary approvals must be obtained from NSW Police, Roads & Maritime Services, Transport, and relevant Service Authorities, prior to commencing work upon or within the road, footway or nature strip.

Pruning

99. Permission is granted for the minimal and selective pruning of the large and mature *Eucalyptus saligna* (Sydney Blue Gum, Tree 42) located along the front boundary of 4-8 Doncaster Avenue, towards the northwest corner of the site, only where needed in order to avoid damage to the tree; or; interference with the approved works, and must be performed prior to the commencement of works (including demolition) so as to minimize the potential for damage/conflict.
100. Permission is also granted for pruning of the northern aspects of the two trees that are growing wholly on the neighbouring private property to the south, no.20, against the common boundary, only where needed to accommodate the approved works.
101. Pruning can only be undertaken by a practicing Arborist who holds a minimum of AQF Level III in Arboriculture, who is also a registered member of a nationally recognized organisation/association ('the site Arborist'), with details confirming compliance to be provided to Council's Landscape Development Officer (9399-0613) prior to the commencement of any pruning works.
102. **The site Arborist must contact Council's Landscape Development Officer (giving at least 2 working days' notice) to arrange a joint site meeting, prior to pruning, to determine the exact location and extent of pruning that is permissible, with the Arborist to comply with any instructions issued by Council.**
103. All pruning must also comply with the requirements of Australian Standard AS 4373-2007 'Pruning of Amenity Trees,' and NSW Work Cover Code of Practice for the Amenity Tree Industry (1998).

Landscape Plan

104. Prior to the commencement of any site works, the Cover Page, Landscape Plans 1-2 and Roof Plan by Myles Baldwin Design, dwg's MBD_12D_01-04, issue D, dated 25.3.15 must be revised to include the following amendments, which must be submitted to, and be approved by, the Certifying Authority/PCA:
 - a. Additional canopy trees to what are currently shown must be provided along the length of the northern site boundary so as to compensate for the loss of existing vegetation in this area, as well as to assist with minimizing the visual bulk and appearance of the development when viewed from the public domain, selecting 3 x 100 litre (pot/bag size at the time of planting) trees, comprising one in the northeast corner, one halfway along this boundary, and one towards the northeast corner, selecting evergreen species which will achieve a minimum height at maturity of 6 metres, with the selected species to be clearly nominated;
 - b. The Landscape Architect must ensure that any new planting within the site, in those garden beds along the length of the western site boundary, which will front directly onto the Doncaster Avenue footpath, will only use species which will not cause overcrowding or encroach out onto the adjoining public domain and impede access or affecting safety/security in anyway.

Civil Works

105. A separate written approval from Council is required to be obtained in relation to all works which are located externally from the site within the road reserve/public place, in accordance with the requirements of the Roads Act 1993. Detailed plans and specifications of the proposed works are to be submitted to and approved by

the Director of City Services prior to commencing any works within the road reserve/public place.

All works within the road reserve/public place must be carried out to the satisfaction of Council and certification from a certified practicing engineer is to be provided to Council upon completion of the works.

Relevant Council assessment and inspection fees, as specified in Council's adopted Pricing Policy, are required to be paid to Council prior to commencement of the works.

Public Utilities

106. A public utility impact assessment must be carried out on all public utility services located on the site, roadway, nature strip, footpath, public reserve or any public areas associated with and/or adjacent to the building works. The assessment should include relevant information from public utility authorities and exploratory trenching or pot-holing, if necessary, to determine the position and level of services.
107. Documentary evidence from the relevant public utility authorities confirming they have agreed to the proposed works and that their requirements have been or are able to be satisfied, must be submitted to the Principal Certifying Authority prior to the commencement of any demolition, excavation or building works.

The owner/builder must make the necessary arrangements and meet the full cost for telecommunication companies, gas providers, Ausgrid, Sydney Water and other service authorities to adjust, repair or relocate their services as required.

REQUIREMENTS DURING CONSTRUCTION & SITE WORK

The following conditions of consent must be complied with during the demolition, excavation and construction of the development.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000* and to provide reasonable levels of public health, safety and environmental amenity during construction.

Site Seepage & Stormwater

108. Details of the proposed connection and or disposal of any site seepage, groundwater or construction site stormwater to Council's stormwater drainage system must be submitted to and approved by Council's Development Engineering Coordinator, prior to commencing these works, in accordance with section 138 of the Roads Act 1993.

Details must include the following information:

- Site plan
- Hydraulic engineering details of the proposed disposal/connection of groundwater or site stormwater to Council/s drainage system
- Volume of water to be discharged
- Location and size of drainage pipes
- Duration, dates and time/s for the proposed works and disposal
- Details of water quality and compliance with the requirements of the Protection of the Environment Act 1997
- Details of associated plant and equipment, including noise levels from the plant and equipment and compliance with the requirements of the

Protection of the Environment Act 1997 and associated Regulations and Guidelines

- Copy of any required approvals and licences from other Authorities (e.g. A water licence from the Department of Planning/Department of Water & Energy).
- Details of compliance with any relevant approvals and licences

Department of Primary Industries – During excavation

109. Engineering measures designed to transfer groundwater around and beneath the basement shall be incorporated into the basement construction to prevent the completed infrastructure from restricting pre-existing groundwater flows.
110. Piping, piling or other structures used in the management of pumped groundwater shall not create a flooding hazard or induce mounding of groundwater. Control of pumped groundwater is to be maintained at all times during dewatering to prevent unregulated offsite discharge.
111. Measurement and monitoring arrangements to the satisfaction of DPI Water are to be implemented. Weekly records of the volumes of all groundwater pumped and the quality of any water discharged are to be kept and a completion report provided after dewatering has ceased. Records of groundwater levels are to be kept and a summary showing daily or weekly levels in all monitoring bores provided in the completion report.
112. Pumped groundwater shall not be allowed to discharge off-site (e.g. adjoining roads, stormwater system, sewerage system, etc.) without the controlling authority's approval and/or owner's consent/s. The pH of discharge water shall be managed to be between 6.5 and 8.5. The requirements of any other approval for the discharge of pumped groundwater shall be complied with.
113. Dewatering shall be undertaken in accordance with groundwater-related management plans applicable to the excavation site. The requirements of any management plan (such as acid sulfate soils management plan or remediation action plan) shall not be compromised by the dewatering activity.
114. The location and construction of groundwater extraction works that are decommissioned are to be recorded in the completion report. The method of decommissioning is to be identified in the documentation.
115. Access to groundwater management works used in the activity is to be provided to permit inspection when required by DPI Water under appropriate safety procedures.

Department of Primary Industries – Following excavation

116. Following completion of the dewatering operations, the applicant shall submit to DPI Water, Parramatta Office, the completion report which shall include:
 - a) detail of the volume of water taken, the precise periods and location of water taken, the details of water level monitoring in all of the relevant bores; and
 - b) a water table map depicting the aquifer's settled groundwater condition and a comparison to the baseline conditions; and
 - c) a detailed interpreted hydrogeological report identifying all actual resource and third party impacts, including an assessment of altered

groundwater flows and an assessment of any subsidence or excessive settlement induced in nearby buildings and property and infrastructure.

117. The completion report is to be assessed by DPI Water prior to any certifying agency's approval for occupation or use of the completed construction.

Inspections During Construction

118. The building works must be inspected by the *Principal Certifying Authority*, in accordance with sections 109 E (3) of the *Environmental Planning & Assessment Act 1979* and clause 162A of the *Environmental Planning & Assessment Regulation 2000*, to monitor compliance with the relevant standards of construction, Council's development consent and the construction certificate.

The *Principal Certifying Authority* must specify the relevant stages of construction to be inspected and a satisfactory inspection must be carried out, to the satisfaction of the *Principal Certifying Authority*, prior to proceeding to the subsequent stages of construction or finalisation of the works (as applicable).

Site Signage

119. A sign must be erected and maintained in a prominent position on the site for the duration of the works, which contains the following details:
- name, address, contractor licence number and telephone number of the *principal contractor*, including a telephone number at which the person may be contacted outside working hours, or *owner-builder* permit details (as applicable)
 - name, address and telephone number of the *Principal Certifying Authority*,
 - a statement stating that "unauthorised entry to the work site is prohibited".

Restriction on Working Hours

120. Building, demolition and associated site works must be carried out in accordance with the following requirements:

Activity	Permitted working hours
All building, demolition and site work, including site deliveries (except as detailed below)	• Monday to Friday - 7.00am to 5.00pm • Saturday - 8.00am to 5.00pm • Sunday & public holidays - No work permitted
Excavating of rock, use of jack-hammers, pile-drivers, vibratory rollers/compactors or the like	• Monday to Friday - 8.00am to 5.00pm • Saturday - No work permitted • Sunday & public holidays - No work permitted

An application to vary the abovementioned hours may be submitted to Council's Manager Health, Building & Regulatory Services for consideration and approval to vary the specified hours may be granted in exceptional circumstances and for limited occasions (e.g. for public safety, traffic management or road safety reasons). Any applications are to be made on the standard application form and include payment of the relevant fees and supporting information. Applications must be made at least 10 days prior to the date of the proposed work and the prior written approval of Council must be obtained to vary the standard permitted working hours.

Demolition Work Requirements

121. The demolition of buildings and the removal, storage, handling and disposal of building materials must be carried out in accordance with the relevant

requirements of WorkCover NSW, the NSW Department of Environment, Climate Change & Water and Randwick City Council policies, including:

- Work Health & Safety Act 2011 and Regulations
- WorkCover NSW Code of Practice for the Safe Removal of Asbestos
- WorkCover NSW Guidelines and Codes of Practice
- Australian Standard 2601 (2001) – Demolition of Structures
- The Protection of the Environment Operations Act 1997 and Regulations
- Relevant EPA Guidelines
- Randwick City Council Asbestos Policy

A copy of Council's Asbestos Policy is available on Council's web site at www.randwick.nsw.gov.au in the Building & Development section or a copy can be obtained from Council's Customer Service Centre.

Removal of Asbestos Materials

122. Work involving the demolition, storage or disposal of asbestos products and materials must be carried out in accordance with the following requirements:

- Relevant Occupational Health & Safety legislation and WorkCover NSW requirements
- Randwick City Council's Asbestos Policy
- A WorkCover licensed demolition or asbestos removal contractor must undertake removal of more than 10m² of bonded asbestos (or as otherwise specified by WorkCover or relevant legislation). Removal of friable asbestos material must only be undertaken by contractor that holds a current friable asbestos removal licence. A copy of the relevant licence must be provided to the Principal Certifying Authority.
- On sites involving the removal of asbestos, a sign must be clearly displayed in a prominent visible position at the front of the site, containing the words 'DANGER ASBESTOS REMOVAL IN PROGRESS' and include details of the licensed contractor.
- Asbestos waste must be stored, transported and disposed of in compliance with the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Waste) Regulation 2005*. Details of the landfill site (which must be lawfully able to receive asbestos materials) must be provided to the Principal Certifying Authority.
- A Clearance Certificate or Statement, prepared by a suitably qualified person (i.e. an occupational hygienist, licensed asbestos removal contractor, building consultant, architect or experienced licensed building contractor), must be provided to Council and the Principal certifying authority upon completion of the asbestos related works which confirms that the asbestos material have been removed appropriately and the relevant conditions of consent have been satisfied.

A copy of Council's Asbestos Policy is available on Council's web site at www.randwick.nsw.gov.au in the Building & Development Section or a copy can be obtained from Council's Customer Service Centre.

Sediment & Erosion Control

123. Sediment and erosion control measures, must be implemented throughout the site works in accordance with the manual for Managing Urban Stormwater – Soils and Construction, published by Landcom, to Council's satisfaction.

Details must be shown in a *Sediment and Erosion Control Plan*, including; a site plan; indicating the slope of land, access points & access control measures, location and type of sediment & erosion controls, location of existing vegetation to be retained, location of material stockpiles and storage areas, location of building operations and equipment, methods of sediment control, details of drainage systems and details of existing and proposed vegetation.

A copy of the Sediment and Erosion Control Plan must be provided to the Principal Certifying Authority and Council. A copy must also be maintained on site and be made available to Council officers upon request.

All soil and erosion control measures must be established prior to the commencement of any works and maintained until the completion of all works. Periodic maintenance of the measures must be undertaken to ensure the measures remain effective.

Dust Control

124. During demolition excavation and construction works, dust emissions must be minimised, so as not to result in a nuisance to nearby residents or result in a potential pollution incident.

Adequate dust control measures must be provided to the site prior to the works commencing and the measures and practices must be maintained throughout the demolition, excavation and construction process, to the satisfaction of Council.

Dust control measures and practices may include:-

- *Provision of geotextile fabric to all perimeter site fencing (attached on the prevailing wind side of the site fencing).*
- *Covering of stockpiles of sand, soil and excavated material with adequately secured tarpaulins or plastic sheeting.*
- *Installation of a water sprinkling system or provision hoses or the like.*
- *Regular watering-down of all loose materials and stockpiles of sand, soil and excavated material.*
- *Minimisation/relocation of stockpiles of materials, to minimise potential for disturbance by prevailing winds.*
- *Landscaping and revegetation of disturbed areas.*

Temporary Site Fencing

125. Temporary site safety fencing or site hoarding must be provided to the perimeter of the site throughout demolition, excavation and construction works, to the satisfaction of Council, in accordance with the following requirements:

- a) Temporary site fences or hoardings must have a height of 1.8 metres and be a cyclone wire fence (with geotextile fabric attached to the inside of the fence to provide dust control), or heavy-duty plywood sheeting (painted white), or other material approved by Council.
- b) Hoardings and site fencing must be designed to prevent any substance from, or in connection with, the work from falling into the public place or adjoining premises and if necessary, be provided with artificial lighting.

- c) All site fencing and hoardings must be structurally adequate, safe and be constructed in a professional manner and the use of poor quality materials or steel reinforcement mesh as fencing is not permissible.
- d) An overhead ('B' Class) type hoarding is required to be provided to protect the public (unless otherwise approved by Council) if:
 - materials are to be hoisted (i.e. via a crane or hoist) over a public footway;
 - building or demolition works are to be carried out on buildings which are over 7.5m in height and located within 3.6m of the street alignment;
 - it is necessary to prevent articles or materials from falling and causing a potential danger or hazard to the public or occupants upon adjoining land;
 - as may otherwise be required by WorkCover, Council or the PCA.

Notes:

- *Temporary site fencing may not be necessary if there is an existing adequate fence in place having a minimum height of 1.5m.*
- *If it is proposed to locate any site fencing, hoardings, amenities or articles upon any part of the footpath, nature strip or public place at any time, a separate Local Approval application must be submitted to and approved by Council's Health, Building & Regulatory Services before placing any fencing, hoarding or other article on the road, footpath or nature strip.*

Public Safety & Site Management

126. Public safety and convenience must be maintained at all times during demolition, excavation and construction works and the following requirements must be complied with:

- a) Public access to the building site and materials must be restricted by existing boundary fencing or temporary site fencing having a minimum height of 1.5m, to Council's satisfaction.

Temporary site fences are required to be constructed of cyclone wire fencing material and be structurally adequate, safe and constructed in a professional manner. The use of poor quality materials or steel reinforcement mesh as fencing is not permissible.

- b) Building materials, sand, soil, waste materials, construction equipment or other articles must not be placed upon the footpath, roadway or nature strip at any time.
- c) The road, footpath, vehicular crossing and nature strip must be maintained in a good, safe, clean condition and free from any excavations, obstructions, trip hazards, goods, materials, soils or debris at all times. Any damage caused to the road, footway, vehicular crossing, nature strip or any public place must be repaired immediately, to the satisfaction of Council.
- d) Building operations such as brick cutting, washing tools or equipment and mixing mortar are not permitted on public footpaths, roadways, nature

strips, in any public place or any location which may lead to the discharge of materials into the stormwater drainage system.

- e) Sediment and erosion control measures, must be implemented throughout the site works in accordance with the manual for Managing Urban Stormwater – Soils and Construction, published by Landcom, to Council's satisfaction.
- f) Site fencing, building materials, bulk bins/waste containers and other articles must not be located upon the footpath, roadway or nature strip at any time without the prior written approval of the Council. Applications to place a waste container in a public place can be made to Council's Health, Building and Regulatory Services department.
- g) Temporary safety fencing is to be provided to any swimming pools under construction, pending the completion of all building work and the pool must not be filled until a fencing inspection has been carried out and approved by the principal certifying authority.

Support of Adjoining Land, Excavations & Retaining Walls

- 127. In accordance with section 80 A (11) of the *Environmental Planning & Assessment Act 1979* and clause 98 E of the *Environmental Planning & Assessment Regulation 2000*, it is a prescribed condition that the adjoining land and buildings located upon the adjoining land must be adequately supported at all times.
- 128. All excavations and backfilling associated with the erection or demolition of a building must be executed safely in accordance with appropriate professional standards and excavations must be properly guarded and supported to prevent them from being dangerous to life, property or buildings.

Retaining walls, shoring or piling must be provided to support land which is excavated in association with the erection or demolition of a building, to prevent the movement of soil and to support the adjacent land and buildings, if the soil conditions require it. Adequate provisions are also to be made for drainage.

Details of proposed retaining walls, shoring, piling or other measures are to be submitted to and approved by the Principal Certifying Authority.

- 129. Prior to undertaking any demolition, excavation or building work in the following circumstances, a report must be obtained from a *professional engineer* which details the methods of support for the dwelling or associated structure on the adjoining land, to the satisfaction of the *Principal Certifying Authority*:
 - when undertaking excavation or building work within the zone of influence of the footings of a dwelling or associated structure that is located on the adjoining land;
 - when undertaking demolition work to a wall of a dwelling that is built to a common or shared boundary (e.g. semi-detached or terrace dwelling);
 - when constructing a wall to a dwelling or associated structure that is located within 900mm of a dwelling located on the adjoining land;
 - as may be required by the *Principal Certifying Authority*.

The demolition, excavation and building work and the provision of support to the dwelling or associated structure on the adjoining land, must also be carried out in accordance with the abovementioned report, to the satisfaction of the *Principal Certifying Authority*.

Building Encroachments

130. There must be no encroachment of any structures or building work onto Council's road reserve, footway, nature strip or public place.

Survey Requirements

131. A Registered Surveyor's check survey certificate or other suitable documentation must be obtained at the following stage/s of construction to demonstrate compliance with the approved setbacks, levels, layout and height of the building to the satisfaction of the Principal Certifying Authority (PCA):

- prior to construction (pouring of concrete) of footings and boundary retaining structures,
- prior to construction (pouring of concrete) of each floor slab,
- upon completion of the building, prior to issuing an *Occupation Certificate*,
- as otherwise may be required by the PCA.

The survey documentation must be forwarded to the Principal Certifying Authority and a copy is to be forwarded to the Council, if the Council is not the Principal Certifying Authority for the development.

132. Noise and vibration emissions during the construction of the building and associated site works must not result in damage to nearby premises or result in an unreasonable loss of amenity to nearby residents. The relevant provisions of the *Protection of the Environment Operations Act 1997* and Office of Environment & Heritage - Environment Protection Authority Guidelines must be satisfied at all times.

133. Noise and vibration from any rock excavation machinery, pile drivers and all plant and equipment must be minimised, by using appropriate plant and equipment, silencers and the implementation of noise management strategies.

134. A demolition and construction Waste Management Plan (WMP) must be developed and implemented for the development, to the satisfaction of Council, prior to the issuing of a construction certificate.

The Waste Management Plan must provide details of the type and quantities of demolition and construction waste materials, proposed re-use and recycling of materials, methods of disposal and details of recycling outlets and land fill sites.

Where practicable waste materials must be re-used or recycled, rather than disposed and further details of Council's requirements including relevant guidelines and pro-forma WMP forms can be obtained from Council's Customer Service Centre or by telephoning Council on 9399 0999.

Road/Asset Opening Permit

135. Any openings within or upon the road, footpath, nature strip or in any public place (i.e. for proposed drainage works or installation of services), must be carried out in accordance with the following requirements, to the satisfaction of Council:

- a) A *Road / Asset Opening Permit* must be obtained from Council prior to carrying out any works within or upon a road, footpath, nature strip or in any public place, in accordance with section 138 of the *Roads Act 1993* and all of the conditions and requirements contained in the *Road / Asset Opening Permit* must be complied with.

- b) Council's Road / Asset Opening Officer must be notified at least 48 hours in advance of commencing any excavation works and also immediately upon completing the works (on 9399 0691 or 0409 033 921 during business hours), to enable any necessary inspections or works to be carried out.
- c) Relevant *Road / Asset Opening Permit* fees, construction fees, inspection fees and security deposits, must be paid to Council prior to commencing any works within or upon the road, footpath, nature strip or other public place,
- d) The owner/developer must ensure that all works within or upon the road reserve, footpath, nature strip or other public place are completed to the satisfaction of Council, prior to the issuing of a *final occupation certificate* or occupation of the development (whichever is sooner).
- e) Excavations and trenches must be back-filled and compacted in accordance with AUSPEC standards 306U.
- f) Excavations or trenches located upon a road or footpath are required to be provided with 50mm depth of cold-mix bitumen finish, level with the existing road/ground surface, to enable Council to readily complete the finishing works at a future date.
- g) Excavations or trenches located upon turfed areas are required to be back-filled, compacted, top-soiled and re-turfed with Kikuyu turf.
- h) The work and area must be maintained in a clean, safe and tidy condition at all times and the area must be thoroughly cleaned at the end of each day's activities and upon completion.
- i) The work can only be carried out in accordance with approved hours of building work as specified in the development consent, unless the express written approval of Council has been obtained beforehand.
- j) Sediment control measures must be implemented in accordance with the conditions of development consent and soil, sand or any other material must not be allowed to enter the stormwater drainage system or cause a pollution incident.
- k) The owner/developer must have a Public Liability Insurance Policy in force, with a minimum cover of \$10 million and a copy of the insurance policy must be provided to Council prior to carrying out any works within or upon the road, footpath, nature strip or in any public place.

Roadway

136. If it is necessary to excavate below the level of the base of the footings of the adjoining roadways, the person acting on the consent shall ensure that the owner/s of the roadway is/are given at least seven (7) days' notice of the intention to excavate below the base of the footings. The notice is to include complete details of the work.

Traffic Management

137. Adequate provisions must be made to ensure pedestrian safety and traffic flow during the site works and traffic control measures are to be implemented in accordance with the relevant provisions of the Roads and Traffic Manual "Traffic Control at Work Sites" (Version 4), to the satisfaction of Council.

138. All work, including the provision of barricades, fencing, lighting, signage and traffic control, must be carried out in accordance with the NSW Roads and Traffic Authority publication - 'Traffic Control at Work Sites' and Australian Standard AS 1742.3 – Traffic Control Devices for Works on Roads, at all times.

139. All conditions and requirements of the NSW Police, Roads & Maritime Services, Transport and Council must be complied with at all times.

Stormwater Drainage

140. Adequate provisions must be made to collect and discharge stormwater drainage during construction of the building to the satisfaction of the principal certifying authority.

The prior written approval of Council must be obtained to connect or discharge site stormwater to Council's stormwater drainage system or street gutter.

141. Any required dewatering must be monitored by the consulting Engineer/s to the satisfaction of the principal certifying authority and documentary evidence of compliance with the relevant conditions of consent and dewatering requirements must be provided to the principal certifying authority and the Council.

The site conditions and fluctuations in the water table are to be reviewed by the consulting Engineer prior to and during the excavation/construction process, to ensure the suitability of the excavation and dewatering process and compliance with Council's conditions of consent.

142. A separate written approval from Council is required to be obtained in relation to any proposed discharge of groundwater into Council's drainage system external to the site, in accordance with the requirements of Section 138 of the Roads Act 1993.

Tree Management

143. Approval is granted for removal of the following trees due to a combination of their small size, poor health, poor condition, being weed species, direct conflict with the works, and no suitable alternatives, but is subject to full implementation of the approved landscape plans:

- a) The two trees at the rear of no.16, between the existing dwelling and southeast corner of the site;
- b) Those along the length of the southern site boundary of no.12, being from west to east, a *Lagerstroemia indica* (Crepe Myrtle, T3), two *Camelia japonica* (Camelia's, T4-5), a *Callistemon viminalis* (Bottlebrush, T6), two *Tibouchina granulosa* (Tibouchina's, T7-8), an *Olea europaea subsp. Africana* (Wild Olive, T9), a *Hibiscus rosa-sinensis* (Hibiscus, T10), a *Tibouchina granulosa* (Tibouchina, T11), a *Mangifera indica* (Mango, T12), a *Cyathea cooperi* (Tree Fern, T13), and two *Archontophoenix cunninghamiana* (Bangalow Palms, T14-15);
- c) The two *Archontophoenix cunninghamiana* (Bangalow Palms, T16-17) adjacent the northwest corner of the existing dwelling at 10 Doncaster Avenue, then to their northwest, on the front property boundary, the *Olea europaea subsp. Africana* (Wild Olive, T18);
- d) The group in the open space to the east of the existing dwelling at 10 Doncaster Avenue, being from west to east, a *Magnolia x soulangeana* (Tulip Tree, T19), an *Elaeocarpus reticulatus* (Blueberry Ash, T20), a

Jacaranda mimosifolia (Jacaranda, T21), a *Banksia integrifolia* (Coastal Banksia, T22), two *Melaleuca quinquinervia* (Broad Leafed Paperbarks, T23-24) and a *Phytolacca americana* (Pokewood, T25);

- e) The *Populus nigra* (Poplar) in the rear yard of 4-8 Doncaster Avenue, along the rear boundary, as well as the *Magnolia x soulangeana* (Tulip Tree, T27) adjacent the northeast corner of the existing dwelling at no.4-8;
- f) Further to the north, around the northeast corner of the site, the group comprising an *Archontophoenix cunninghamiana* (Bangalow Palm, T28), two *Cinnamomum camphora* (Camphor Laurels, T29-30);
- g) Those along the northern boundary of no 4-8, being from east to west, a *Jacaranda mimosifolia* (Jacaranda, T31), two *Lagerstroemia indica* (Crepe Myrtles, T32 and T34), two *Camelia japonica* (Camelia, T33 and T35), a *Ligustrum lucidum* (Large Leaved Privet, T36), and a *Cinnamomum camphora* (Camphor Laurel, T37);
- h) Still within no.4-8, around the northwest corner, being from east to west, an *Ulmus parvifolia* (Chinese Weeping Elm, T38) and two *Grevillea robusta* (Silky Oaks, T39-40);
- i) To their west, along the front property boundary, being from north to south, a *Camelia sasanqua* (Camelia, T41), three *Grevillea robusta* (Silky Oaks, T43-45), a *Eucalyptus carnea* (White Mahogany, T46).

REQUIREMENTS PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

The following conditions of consent must be complied with prior to the 'Principal Certifying Authority' issuing an 'Occupation Certificate'.

Note: For the purpose of this consent, any reference to 'occupation certificate' shall also be taken to mean 'interim occupation certificate' unless otherwise stated.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000*, Council's development consent and to maintain reasonable levels of public health, safety and amenity.

Occupation Certificate Requirements

144. An Occupation Certificate must be obtained from the Principal Certifying Authority prior to any occupation of the building work encompassed in this development consent (including alterations and additions to existing buildings), in accordance with the relevant provisions of the *Environmental Planning & Assessment Act 1979*.

An Occupation Certificate must not be issued for the development if the development is inconsistent with the development consent. The relevant requirements of the *Environmental Planning & Assessment Act 1979* and conditions of development consent must be satisfied prior to the issuing of an occupation certificate.

Occupation Certificate - All developments

145. Prior to the issuing of an interim or final occupation certificate, a statement is required to be obtained from the Principal Certifying Authority (or other suitably qualified person), which confirms that the development is not inconsistent with

the development consent and the relevant conditions of development consent have been satisfied.

Details of *critical stage* inspections carried out by the principal certifying authority together with any other certification relied upon and must also be provided to Council with the occupation certificate.

Structural Certification

146. A Certificate must be obtained from a *professional engineer*, which certifies that the building works satisfy the relevant structural requirements of the Building Code of Australia and approved design documentation, to the satisfaction of the *Principal Certifying Authority*. A copy of which is to be provided to Council.

BASIX Requirements

147. In accordance with Clause 154B of the *Environmental Planning & Assessment Regulation 2000*, a Certifying Authority must not issue an Occupation Certificate for this development, unless it is satisfied that each of the required BASIX commitments have been fulfilled.

Relevant documentary evidence of compliance with the BASIX commitments is to be forwarded to the Council upon issuing an Occupation Certificate.

Council's Infrastructure, Vehicular Crossings & Road Openings

148. The owner/developer must meet the full cost for a Council approved contractor to:
- a) Construct a full width concrete heavy duty vehicular crossing and layback at kerb opposite the vehicular entrance to the premises to Council's specifications and requirements.
 - b) Remove any redundant concrete vehicular crossing and layback and to reinstate the area with concrete footpath and integral kerb and gutter to Council's specification.
 - c) Carry out all works associated with reconstruction of the Council and/or Sydney Water controlled stormwater pipeline, both within the development site and Doncaster Avenue.
 - d) Carry out all works associated with reconstruction of the Sydney Water controlled stormwater pipeline, both within the development site and Doncaster Avenue.
 - e) Undertake street tree planning along the Doncaster Avenue site frontage to Council's satisfaction and specification.
149. Prior to issuing a final occupation certificate or occupation of the development (whichever is sooner), the owner/developer must meet the full cost for Council or a Council approved contractor to repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc which are due to building works being carried out at the above site. This includes the removal of cement slurry from Council's footpath and roadway.
150. All external civil work to be carried out on Council property (including the installation and repair of roads, footpaths, vehicular crossings, kerb and guttering and drainage works), must be carried out in accordance with Council's Policy for "Vehicular Access and Road and Drainage Works" and the following requirements:

- a) All work on Council land must be carried out by Council, unless specific written approval has been obtained from Council to use non-Council contractors.
- b) Details of the proposed civil works to be carried out on Council land must be submitted to Council in a *Civil Works Application Form*, prior to an occupation certificate being issued for the development, together with payment of the relevant fees.
- c) If it is proposed to use non-Council contractors to carry out the civil works on Council land, the work must not commence until the written approval has been obtained from Council and the work must be carried out in accordance with the conditions of consent, Council's design details and payment of a Council design and supervision fee.
- d) The civil works must be completed in accordance with Council's conditions of consent and approved design and construction documentation, prior to occupation of the development, or as otherwise approved by Council in writing.

Service Authorities

Sydney Water Requirements

151. A section 73 Compliance Certificate, under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. An Application for a Section 73 Certificate must be made through an authorised Water Servicing Coordinator. For details, please refer to the Sydney Water web site www.sydneywater.com.au > Building and developing > Developing your Land > Water Servicing Coordinator or telephone 13 20 92.

Please make early contact with the Water Servicing Coordinator, as building of water/sewer extensions may take some time and may impact on other services and building, driveway or landscape design.

The Section 73 Certificate must be submitted to the Principal Certifying Authority and the Council prior to issuing an Occupation Certificate or Subdivision Certificate, whichever the sooner.

As a mains power distribution pole is located on the same side of the street and within 15m of the development site, the applicant/developer must meet the full cost for Ausgrid to relocate the existing overhead power feed between the mains distribution pole in Doncaster Avenue and the development site to an underground (UGOH) connection.

152. The applicant must meet the full cost for Council or a Council approved contractor to repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc which are due to building works being carried out at the above site. This includes the removal of cement slurry from Council's footpath and roadway.
153. The applicant must meet the full cost for any repairs required to neighbouring properties including Light Rail infrastructure.

Undergrounding of Site Power

154. Prior to the issuing of any form of occupation certificate and at no cost to Council the existing overhead power feed between the mains distribution pole in Doncaster Avenue and the development site, must be relocated to an underground (UGOH) connection. All work to the requirements of Ausgrid.

Undergrounding of Power

155. The applicant shall meet the full cost for the overhead power lines and/or telecommunication cables located along the Doncaster Avenue site frontage to be relocated underground. The applicant shall liaise directly with the relevant service utility authorities to organise for the cables to be relocated. All cables must be relocated underground to the satisfaction of the relevant service utility authority prior to the issuing of an occupation certificate for the development.

Stormwater Drainage

156. A "restriction on the use of land" and "positive covenant" (under section 88E of the Conveyancing Act 1919) shall be placed on the title of the subject property to ensure that the onsite detention/infiltration system is maintained and that no works which could affect the design function of the detention/infiltration system are undertaken without the prior consent (in writing) from Council. Such restriction and positive covenant shall not be released, varied or modified without the consent of the Council.

Notes:

- a. The "restriction on the use of land" and "positive covenant" are to be to the satisfaction of Council. A copy of Council's standard wording/layout for the restriction and positive covenant may be obtained from Council's Development Engineer.
 - b. The works as executed drainage plan and hydraulic certification must be submitted to Council prior to the "restriction on the use of land" and "positive covenant" being executed by Council.
157. A works-as-executed drainage plan prepared by a registered surveyor and approved by a suitably qualified and experienced hydraulic consultant/engineer must be forwarded to the Principal Certifying Authority and the Council. The works-as-executed plan must include the following details (as applicable):
- The location of any detention basin/s with finished surface levels;
 - Finished site contours at 0.2 metre intervals;
 - Volume of storage available in any detention areas;
 - The location, diameter, gradient and material (i.e. PVC, RC etc) of all stormwater pipes;
 - The orifice size/s (if applicable);
 - Details of any infiltration/absorption systems; and
 - Details of any pumping systems installed (including wet well volumes).
158. The applicant shall submit to the Principal Certifying Authority (PCA) and Council, certification from a suitably qualified and experienced Hydraulic Engineer, which confirms that the design and construction of the stormwater drainage system complies with the Building Code of Australia, Australian Standard AS3500.3:2003 (Plumbing & Drainage- Stormwater Drainage) and conditions of this development consent.
- The certification must be provided following inspection/s of the site stormwater drainage system by the Hydraulic Engineers to the satisfaction of the PCA.
159. The applicant shall submit to the Principal Certifying Authority (PCA) and Council certification from a suitably qualified and experienced professional engineer, confirming that the walls of the basement have been fully tanked and waterproofed to prevent the entry of all groundwater in the basement level/s and

that any required sub-soil drainage systems have been provided in accordance with the conditions of this consent.

160. A "restriction on the use of land" and "positive covenant" (under section 88E of the Conveyancing Act 1919) shall be placed on the title of the subject property to ensure that the proposed "Flood Water Transfer" areas are maintained and that no works which could affect the design function of the "Flood Water Transfer" areas are undertaken without the prior consent (in writing) from Council. Such restriction and positive covenant shall not be released, varied or modified without the consent of the Council.

Notes:

- The "restriction on the use of land" and "positive covenant" are to be to the satisfaction of Council. A copy of Council's required wording/layout for the restriction and positive covenant may be obtained from Council's Development Engineer.
- The works as executed drainage plan and hydraulic certification for the "Flood Water Transfer" areas must be submitted to Council prior to the "restriction on the use of land" and "positive covenant" being executed by Council.

Landscaping

161. Prior to issuing any type of Occupation Certificate, certification from a qualified professional in the landscape/horticultural industry must be submitted to, and be approved by, the PCA, confirming the date that the completed landscaping was inspected, and that it has been installed substantially in accordance with the Cover Page, Landscape Plans 1-2 and Roof Plan by Myles Baldwin Design, dwg's MBD_12D_01-04, issue D, dated 25.3.15, as well as any relevant conditions of consent. Suitable strategies must be implemented to ensure that the landscaping is maintained in a healthy and vigorous state, until maturity, for the life of the development.
162. Suitable strategies must be implemented to ensure that the landscaping is maintained in a healthy and vigorous state, until maturity, for the life of the development.

Tree Protection Certification

163. Prior to the issue of any Occupation Certificate, written certification in the form of a Final Compliance Report from the site Arborist must be submitted to, and be approved by, the PCA, confirming that the Tree Protection conditions, recommendations of the Arborists Reports, and any other instructions issued were complied with during the course of construction.

Waste Management

164. Prior to the occupation of the development, the owner or applicant is required to contact Council's City Services department, to make the necessary arrangements for the provision of waste services for the premises. The waste storage areas shall be clearly signposted.

OPERATIONAL CONDITIONS

The following operational conditions must be complied with at all times, throughout the use and operation of the development.

These conditions have been applied to satisfy the relevant requirements of the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000*, Council's development consent and to maintain reasonable levels of public health and environmental amenity.

165. There are to be no emissions or discharges from the premises which give rise to a public nuisance or result in an offence under the *Protection of the Environment Operations Act 1997* and Regulations

Use of premises

166. The car spaces within the development are for the exclusive use of the occupants of the building. The car spaces must not be leased to any person/company that is not an occupant of the building.

External Lighting

167. External lighting to the premises must be designed and located so as to minimise light-spill beyond the property boundary or cause a public nuisance.

Plant & Equipment

168. The operation of all plant and equipment upon the premises shall not give rise to an 'offensive noise' as defined in the *Protection of the Environment Operations Act 1997* and Regulations.

In this regard, the operation of the plant and equipment shall not give rise to an $L_{Aeq, 15 \text{ min}}$ sound pressure level at any affected premises that exceeds the background $L_{A90, 15 \text{ min}}$ noise level, measured in the absence of the noise source/s under consideration by more than 5dB(A) in accordance with relevant NSW Office of Environment & Heritage (EPA) Noise Control Guidelines.

Air Conditioners

169. Air conditioning plant and equipment shall not be operated during the following hours if the noise emitted can be heard within a habitable room in any other residential premises, or, as otherwise specified in relevant Noise Control Regulations:

- before 8.00am or after 10.00pm on any Saturday, Sunday or public holiday; or
- before 7.00am or after 10.00pm on any other day.

Rainwater Tanks

170. The operation of plant and equipment associated with rainwater tanks are to be restricted to the following hours if the noise emitted can be heard within a habitable room in any other residential premises:

- before 8.00am or after 8.00pm on weekends or public holiday; or
- before 7.00am or after 8.00pm on weekdays.

Residential Parking Permits

171. All prospective owners and tenants of the building must be notified that Council will not issue any residential parking permits to occupants/tenants of this development.

172. A notice shall be placed in the foyer/common areas of the building advising tenants/occupiers that they are in a building which does not qualify for on-street resident parking permits.

Stormwater Detention/Infiltration System

173. The detention area/infiltration system must be regularly cleaned and maintained to ensure it functions as required by the design.

ADVISORY NOTES

The following information is provided for your assistance to ensure compliance with the *Environmental Planning & Assessment Act 1979*, *Environmental Planning & Assessment Regulation 2000*, or other relevant legislation and Council's policies. This information does not form part of the conditions of development consent pursuant to Section 80A of the Act.

- A1 The requirements and provisions of the *Environmental Planning & Assessment Act 1979* and *Environmental Planning & Assessment Regulation 2000*, must be fully complied with at all times.
- Failure to comply with these requirements is an offence, which renders the responsible person liable to a maximum penalty of \$1.1 million. Alternatively, Council may issue a penalty infringement notice (for up to \$3,000) for each offence. Council may also issue notices and orders to demolish unauthorised or non-complying building work, or to comply with the requirements of Council's development consent.
- A2 This determination does not include an assessment of the proposed works under the Building Code of Australia (BCA) and other relevant Standards. All new building work (including alterations and additions) must comply with the BCA and relevant Standards and you are advised to liaise with your architect, engineer and building consultant prior to lodgement of your construction certificate.
- A3 In accordance with the requirements of the *Environmental Planning & Assessment Act 1979*, building works, including associated demolition and excavation works (as applicable) must not be commenced until:
- A *Construction Certificate* has been obtained from an Accredited Certifier or Council,
 - An Accredited Certifier or Council has been appointed as the *Principal Certifying Authority* for the development,
 - Council and the Principal Certifying Authority have been given at least 2 days' notice (in writing) prior to commencing any works.
- A4 Council's Building Certification & Fire Safety team can issue your *Construction Certificate* and be your *Principal Certifying Authority* for the development, to undertake inspections and ensure compliance with the development consent, relevant building regulations and standards of construction. For further details contact Council on 9399 0944.
- A5 A Local Approval application must be submitted to and be approved by Council prior to commencing any of the following activities on a footpath, road, nature strip or in any public place:
- Install or erect any site fencing, hoardings or site structures
 - Operate a crane or hoist goods or materials over a footpath or road
 - Placement of a waste skip or any other container or article.

For further information please contact Council on 9399 0944.

A6 Specific details of the location of the building/s should be provided in the Construction Certificate to demonstrate that the proposed building work will not encroach onto the adjoining properties, Council's road reserve or any public place.

A7 Prior to commencing any works, the owner/builder should contact *Dial Before You Dig* on 1100 or www.dialbeforeyoudig.com.au and relevant Service Authorities, for information on potential underground pipes and cables within the vicinity of the development site.

A8 This consent does not authorise any trespass or encroachment upon any adjoining or supported land or building whether private or public. Where any underpinning, shoring, soil anchoring (temporary or permanent) or the like is proposed to be carried out upon any adjoining or supported land, the land owner or principal contractor must obtain:

- the consent of the owners of such adjoining or supported land to trespass or encroach, or
- an access order under the *Access to Neighbouring Land Act 2000*, or
- an easement under section 88K of the *Conveyancing Act 1919*, or
- an easement under section 40 of the *Land & Environment Court Act 1979*, as appropriate.

Section 177 of the *Conveyancing Act 1919* creates a statutory duty of care in relation to support of land. Accordingly, a person has a duty of care not to do anything on or in relation to land being developed (the supporting land) that removes the support provided by the supporting land to any other adjoining land (the supported land).

A9 Smoke alarms are required to be installed in all residential dwellings, in accordance with the relevant provisions of the *Environmental Planning & Assessment Act 1979* and the Building Code of Australia. Details should be included in the construction certificate application.

A10 Demolition work and removal of asbestos materials:

- A copy of Council's Asbestos Policy is available on Council's web site at www.randwick.nsw.gov.au in the Building & Development section or a copy can be obtained from Council's Customer Service Centre.
- It is the responsibility of the persons undertaking demolition work to obtain the relevant WorkCover licences and permits.

A11 Any external lighting to the premises should be designed and located so as to minimise light-spill beyond the property boundary or cause a public nuisance.

A12 Building owners and occupiers should consider implementing appropriate measures to prevent children from falling from high-level window openings and balconies (e.g. by installing window locking devices; installing heavy-duty screens to window openings; limiting the dimensions of any openings to 125mm; ensuring balustrades to balconies are at least 1m high and; locating fixtures, fittings and furniture away from high-level windows and balconies).

For further information about preventing falls from windows and balconies refer to www.health.nsw.gov.au/childsafety or pick-up a brochure from Council's Customer Service Centre.

- A13 Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.
- A14 The applicant is to advise Council in writing and/or photographs of any signs of existing damage to the Council roadway, footway, or verge prior to the commencement of any building/demolition works.
- A15 Further information and details on Council's requirements for trees on development sites can be obtained from the recently adopted Tree Technical Manual, which can be downloaded from Council's website at the following link, <http://www.randwick.nsw.gov.au> - Looking after our environment – Trees – Tree Management Technical Manual; which aims to achieve consistency of approach and compliance with appropriate standards and best practice guidelines.

Yours faithfully



.....
Frank Ko
Acting Manager Development Assessment

Rights of Appeal and Review of Determination:

- If you are dissatisfied with this decision, Section 97 of the Environmental Planning and Assessment Act 1979 gives you the right to appeal to the Land and Environment Court within 6 months after the date on which you receive this notice.
- Section 82A of the Environmental Planning and Assessment Act 1979 provides that the applicant may request the Council to Review the determination. The request must be made in writing (or on the review application form) and determined within six (6) months after the 11 October 2016, as specified in this notice of determination, together with payment of the appropriate fee.

General Advisory Notes & Requirements:

Legal requirements prior to commencing any building or subdivision works:

Prior to commencing any building, subdivision or associated works (including any shop or office 'fit-out' work), the following provisions of the Environmental Planning and Assessment Act 1979 (the 'Act') and the Environmental Planning & Assessment Regulation 2000 (the 'Regulation') are to be complied with:

- (i) *A Construction Certificate is to be obtained in accordance with Section 81A (2) (a) of the Act.*

- (ii) A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A of the Act and clause 103 of the Regulation.
- (iii) Council is to be notified at least two (2) days of the intention to commence building works, in accordance with Section 81A of the Act and clause 104 of the Regulation.

The applicant may apply to the Council or an Accredited Certifier to issue a Construction Certificate and to be the Principal Certifying Authority to monitor compliance with the approval and to issue the occupation certificate.

Council's Building Certification Services Business Unit can provide these services and further information, including a copy of the service agreement and details of certification and inspection fees can be obtained by telephoning Council's Building Certification Services Business Unit on 9399 0944.

Building Code of Australia

The Construction Certificate plans and associated specifications must comply with the relevant provisions of the Building Code of Australia (BCA) and the building work must be carried out in accordance with development consent and Construction Certificate.

The assessment of this development application does not include an assessment under the BCA and details of compliance with the relevant provisions of the BCA and conditions of development consent are to be provided in the plans, specifications and documentation for the Construction Certificate.

Compliance with development consent

Please note that the development and all building work must be carried out fully in accordance with the development consent and conditions of consent.

It is an offence to carry out any unauthorised development or building work or to carry out any development or building work that is not in accordance with Council's development consent.

An offence under Environmental Planning and Assessment Act 1979 and Regulations is subject to a penalty up to \$1,100,000 and \$110,000 respectively. Alternatively, Council may issue a penalty infringement notice (for up to \$3000) for each offence.

Council may also serve a notice and an order to require the demolition/removal of unauthorised building work or to require full compliance with Council's development consent.

Prior to commencement of any variations from the approved plans and conditions of approval, an amended development application must be submitted to and approved by Council. Also, a (new or amended) Construction Certificate must be obtained from the Council or an Accredited Certifier.

Failure to obtain the required prior written development consent from council for any variations to the consent (and failure to obtain a new/amended construction certificate) is an offence, which may result in the above penalties or infringements.

Construction certificate applications

Applications for a Construction Certificate are to be made in the standard form and in relation to an application made to Council's Building Certification Services, submission requirements include:

- a completed Construction Certificate application form and payment of the appropriate fee.
- 4 copies of detailed architectural building plans and building specifications.
- 4 copies of structural engineering plans, detailing; all reinforced concrete floor slabs, footings, beams, columns and other structures; retaining walls; piers; underpinning; shoring systems; structural steelwork and framing details (as applicable).
- 4 copies of other technical details (i.e. details of mechanical ventilation systems, stormwater drainage, timber framing and roof trusses, termite protection, sediment control, boundary/party wall construction, masonry construction, acoustic and sound transmission, glazing, wet areas, smoke alarm systems and other fire safety provisions), where applicable.

- full details of compliance with the provisions of the Building Code of Australia, including details of the standards of construction that are to be complied with (i.e. Australian Standards).
- a list of existing and proposed fire safety measures (ie. fire doors, hose reels, fire hydrants, fire extinguishers, sprinkler systems, fire and smoke detection systems, smoke hazard management systems, exit signs and emergency lighting etc), except in relation to dwellings and associated structures.
- any compliance certificates relied upon.
- details of payment of the Building Industry Long Service Levy, in relation to building work which costs \$25,000 or more
- details of compliance with the Home Building Act Insurance Provisions, in relation to residential building work.
- details of existing and proposed swimming pool fencing and barriers showing compliance with the Swimming Pools Act 1992 and AS1926 and details of acoustic enclosures for pool equipment.

Inspection of building works

The Principal Certifying Authority is required to specify the stages of construction which are to be inspected (including relevant 'critical stage' inspections), to ensure that the development complies with the relevant requirements of the development consent, Building Code of Australia and Australian Standards.

Critical stage inspections may include the following stages of construction (as specified by the appointed principal certifying authority):-

- Footings, after placement of steel reinforcement and before pouring concrete.
- Reinforced concrete floor slabs, columns and beams, after placement of steel reinforcement and before pouring concrete.
- Timber or metal floor, wall and roof framing (including columns and beams), before installing floor, wall or roof cladding.
- Waterproofing of 'wet areas', after installation, before tiling or covering over.
- Fire resisting construction (e.g. party / separating walls, fire resisting coverings / plasterboard).
- Sound transmission work including separating walls or ceilings.
- Immediately after the building (or alterations and additions to a building) have been completed and before an Occupation Certificate is issued.

Reference should be made to clause 162A of the Environmental Planning & Assessment Regulation 2000 for details relating to the critical stage inspections.

Occupation Certificate requirements

An occupation certificate must be obtained from the principal certifying authority, prior to occupation of the new building work or part of a building (including alterations and additions) or, a change of building use, as required by sections 109M and 109N of the Environmental Planning & Assessment Act 1979.

Failure to obtain the required occupation certificate is an offence and is subject to a maximum penalty of up to \$110,000 or the issue of a penalty infringement notice.

Fire safety requirements

Under the provisions of Part 9 of the Environmental Planning and Assessment Regulation 2000 (except in relation to class 1a dwellings and class 10 non-habitable buildings or structures):

- A 'Fire Safety Certificate' is required to be submitted to the Council and the New South Wales Fire Brigades prior to occupation of the building and a fire safety statement is to be provided on an annual basis thereafter, in relation to all of the essential fire safety measures within the building premises.
- All of the Fire Safety measures within the premises must be included in a single and complete Fire Safety Certificate, which must be the same measures as those contained in the relevant

'Fire Safety Schedule' for the development. Any variations or amendments to the Fire Safety Schedule must be approved by the Principal Certifying Authority and written details must be provided to Council accordingly.

- *Following the issue of a Fire Safety Certificate, a Fire Safety Statement must be submitted to Council on an annual basis, which certifies that all of the essential fire safety measures are present and operational in accordance with the relevant standards of performance.*
- *A copy of the current Fire Safety Schedule and Fire Safety Certificate/Statement must also be displayed in a conspicuous position within the building at all times.*
- *Failure to submit a Fire Safety Statement by the due date annually is an offence which may result in the issuing of a penalty infringement notice of up to \$2000.*

Sydney Water Requirements

All building, plumbing and drainage work must be carried out in accordance with the requirements of the Sydney Water Corporation.

The approved plans must be submitted to the Sydney Water Tap in™ online service, to determine whether the development will affect Sydney Water's waste water and water mains, stormwater drains and/or easements, and if any further requirements need to be met.

The Sydney Water Tap in™ online service replaces the Quick Check Agents as of 30 November 2015

The Tap in™ service provides 24/7 access to a range of services, including:

- Building plan approvals
- Connection and disconnection approvals
- Diagrams
- Trade waste approvals
- Pressure information
- Water meter installations
- Pressure boosting and pump approvals
- Change to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's Tap in™ online service is available at:
<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

The Principal Certifying Authority must ensure that the developer/owner has submitted the approved plans to Sydney Water Tap in online service.

WorkCover requirements

The applicant, owner and builder is advised to ensure that the relevant requirements of WorkCover New South Wales are complied with, in relation to occupational health and safety, including the handling of hazardous materials (i.e. materials containing asbestos). Further information can be obtained from the WorkCover New South Wales 400 Kent Street, Sydney, NSW, 2000 or telephone 9370 5000 or 13 10 50.

Disability Discrimination Act

The applicant/owner is advised that this approval does not guarantee compliance with the provisions of the Disability Discrimination Act 1992 and the applicant should therefore consider their liability under the Act. In this regard, the applicant is advised that compliance with the requirements of the Building Code of Australia and Australian Standard 1428.1 - Design for Access and Mobility does not necessarily satisfy the objectives of the Disability Discrimination Act 1992.

The applicant/owner is requested to give consideration to providing access and facilities for people with disabilities in accordance with Australian Standard 1428 Parts 1, 2, 3 and 4 - Design for

Access and Mobility, which may be necessary to satisfy the objectives of the Disability Discrimination Act 1992.

Dividing Fences

Any approval for fences on side boundaries common to other private properties is independent of any consent or agreement which may be required of any adjoining owner under the provisions of the Dividing Fences Act and if applicable, you are advised to consult with the owners of the adjoining premises in this regard.

Access to adjoining land, encroachments and work affecting other premises

This consent does not authorise any trespass, encroachment or carrying out of any works upon any adjoining land or building whether private or public. Where any access, underpinning, shoring or any other works are proposed to be carried out upon any adjoining land (including work affecting party walls, common roof construction or any other building works on or adjacent to the site boundaries), the owner/builder must obtain:

- a) the consent of the owners of the adjoining land to access, carry out works or encroach upon their land, or otherwise affect an easement, right-of-way or other restriction on the certificate of title, or
- b) an access order under the Access to Neighbouring Land Act 2000, or
- c) an easement under section 88K of the Conveyancing Act 1919, or
- d) an easement under section 40 of the Land & Environment Court Act 1979 as appropriate.

Section 177 of the Conveyancing Act 1919 creates a statutory duty of care in relation to support of land. Accordingly, a person has a duty of care not to do anything on or in relation to land being developed (the supporting land) that removes the support provided by the supporting land to any other adjoining land (the supported land).

Local Government Act requirements

A separate Local Approval application is required to be submitted to and approved by Council if it is proposed to place any articles, site fencing, hoardings, materials or waste containers in a public place and to hoist or use a crane over a footway, in accordance with Section 68 of the Local Government Act 1993.

Further Information

Should you require further information on the determination of this development application, please contact Stuart Harding on **9093 6894** between 9.00am to 12 noon Monday to Friday or by appointment.

Appendix E

Archaeological Technical Report

E. Archaeological Research Design (ARD)

This ARD has been designed to enable archaeological excavation of archaeological deposits that may occur within the substrate of the Doncaster Ave PAD. Based on GML's existing knowledge of the stratigraphic architecture of the substrate a procedure was developed to maximise the probability of identifying and recovering archaeological deposits. The procedure also aimed to minimise the possibility of damage to the fragile substrate that would likely occur if separate phases of excavation were conducted. An iterative approach was adopted which utilised methods in sequence from non-invasive to invasive, leading to immediate salvage excavation. The existing knowledge used to develop the field procedure derives from field investigations implemented at the adjacent site RSY 1.

The methods included in the field procedure have previously been utilised during investigations by GML either at the adjacent RSY 1 site, or sites equivalently located on the Botany Sands. A level of confidence therefore exists with respect to the outcomes of the proposed field procedure. The background environmental context for the work is detailed in the main report and has not been repeated here.

E.1 Mechanism for Archaeological Test Excavation

Given the developed nature of the site, the deep sand substrate, the instability of these sands once excavated and the potential for flooding, it is not possible to conduct archaeological test excavation under the Code;¹ a Section 90 permit is therefore required.

The investigations and processes to be implemented under a Section 90 permit include the following stages:

- demolition and monitoring of existing buildings from across the site;
- geophysical survey (non-intrusive);
- borehole survey; and
- archaeological salvage.

E.2 The Investigation Methodology

The archaeological sampling strategy to be employed during the Doncaster Avenue project is based upon the methodology for sampling, as presented by Orton.² Orton presents a 12-step process³ for determining a suitable process of sampling and to provide a suitable test excavation methodology. This methodology, following Orton's categories, is presented below.

E.2.1 Existing Knowledge

Existing knowledge of the Doncaster Ave PAD is presented in the main report and includes AHIMS data and prior reports, environmental context, impacts to the study area, and the outcomes of the investigations for RSY1. The information demonstrated that the substrate at the Doncaster Ave PAD is deep and, notwithstanding the obstruction of the existing infrastructure, could not be adequately investigated using the procedures outlined in the Code.⁴ It was also apparent that the substrate is very fragile and may suffer from damage if a staged procedure of test followed by salvage excavations is implemented. The site has a high potential for flooding; once opened any archaeological test units would collapse if flooded. This would result in the immediate and permanent loss of any unexcavated adjacent archaeological deposit.

The methodology developed addresses these issues by utilising a defined series of stages with increasing iterations of invasiveness, each stage informing the sampling design of the next. The progression of stages is ultimately designed to clarify whether an archaeological deposit is present (or not) and recover it.

E.2.2 Objectives (and Research Questions)

The fundamental objective of the geoscientific surveys and archaeological excavation of the Doncaster Ave PAD is to undertake sufficient work to allow the extent, content, condition, and integrity of archaeological deposits to be assessed to determine the locations where salvage excavation is required. A methodology for salvage is provided, which responds to the risks posed by excavation within sand dunes.

In order to reach this objective a number of research questions have been established, to guide the archaeological process and provide the basis for questioning the data collected. Relevant research questions include:

1. Is there a subsurface deposit present?
 - a. Does the stratigraphic architecture of that deposit differ across the Doncaster Ave PAD?
 - b. What is the condition and integrity of the deposit? How has it been impacted by the historical activities that are known to have affected the adjacent site RSY 1?
 - c. If archaeological materials exist, are they stratified within the sand deposits?
 - d. Is there a stratified palaeoenvironmental record? Can it be temporally correlated with archaeological materials, where they exist?
 - e. How old is the deposit? Can it be dated by geochronological methods?
2. How can the deposit be interpreted?
 - a. What are the physical attributes of the deposit (eg stone, carbon, clay or other, contact period items)?
 - f. For stone deposits, what are the physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types across the Doncaster Ave PAD or between stratigraphic units?
 - g. For contact period deposits, what are the characteristics and how do they describe interaction and relationships with the new colony? To what period do the contact items date (glass and ceramic typologies)? Does material use represent continued application of traditional Aboriginal techniques, or adaptation to the new materials?
 - b. Do the deposits provide evidence for intra-site patterning?
 - c. Does that patterning lend itself to interpretation? Can the interpretation be used to support the notion of Aboriginal traditions and prior landscape use?
 - d. How does the subsurface deposit compare to that found over the Botany Sands substrate?
3. Can the archaeology be interpreted in a regional context?

- a. Where did raw stone materials originate from? Have they been brought into the study area? From how far away has the stone been brought?
 - b. Is there evidence of trade in connection to stone deposits?
- 4. Is the archaeological deposit culturally significant?
 - a. What is the heritage value of the deposit, both scientifically and culturally?
 - b. How does the Aboriginal community view and value the deposit identified?
- 5. What are the implications for other nearby areas?
 - a. Beyond RSY 1, are there other archaeological deposits in the local area?
 - b. How well has this process identified and characterised the deposit? And can it be applied to other future development areas?

E.2.3 Population

The targeted population is defined by the stratigraphic architecture occurring within the study area boundary. Archaeological sampling will be targeted to those areas that can be shown to have intact pre-European geological deposits and that do not pose a danger to the fieldworkers (eg at depths dangerous for hand excavation). At the southeast of the study area a conservation management zone will not be excavated and will instead be preserved indefinitely (Appendix D).

Salvage excavation will occur at locations shown to be composed of intact strata, with an archaeological signature, using an initial grid pattern of exploratory 1m squares, and immediately expanding laterally if cultural materials (sufficient to warrant further investigation, see Section E2.6 for trigger points) are identified.

E.2.4 Data to be Collected

Data will be collected for each square during salvage excavations using a context sheet based on the terminology of the CSIRO.⁵ Data collected on context sheets will include: a square identifier, depths, colour, texture, strength, moisture, structure and inclusions. In addition, schematic drawings and a photographic record will be acquired for each excavated square. Aboriginal objects recovered during excavation will be rudimentarily analysed for material type and backing and used to inform the direction of salvage expansion.

E.2.5 Degree of Precision Required

The precision of acquired data in the adopted approach increases iteratively for each sequential method applied. This ranges from broad remote sensing of the geological substrate to the excavation and sampling of features occurring within an excavated spit. Precision is purposefully increased as the sample population decreases in size.

E.2.6 Method of Measure (Excavation Threshold/Trigger Points)

The 'background' density of Aboriginal objects within the study area is based on prior knowledge from excavations of the adjacent site RSY 1. At that site, Aboriginal objects occurred in a frequency whereby a lower threshold (trigger point) of five objects per horizontal metre square (counted by truncating all intact stratigraphical layers) was used to cease lateral expansion.

For the Doncaster PAD, objects are defined as stone artefact with identifiable landmarks, not angular fragments. The trigger point (threshold) for the commencement or cessation of archaeological excavation is five objects, recovered within one metre square, from all combined intact stratigraphical layers (excluding fill layers).

Other significant deposits, such as hearths, oven/fire pits, heat retaining stone, contact period objects etc, may also occur and will be investigated irrespective of the associated stone artefact deposit, as they could reflect domiciliary areas. The presence of these items is a trigger point for further excavation.

E.2.7 The Framework for Sampling

The sampling procedure uses an iterative and sequential approach, where each method utilised is less invasive than and informative to the implementation of the next method. The approach aims to maximise knowledge of the stratigraphic architecture of the study area while minimising impact to it. Once the stratigraphic architecture is known, salvage excavations can be commenced immediately while maximising the recovery of Aboriginal cultural materials.

Demolition

Demolition of existing infrastructure will be directed and implemented by Built or an approved representative. GML and a RAP will be present for the duration of the demolition works and will direct demolition works to stop if damage to intact geological deposits is deemed likely to occur. The site should be made as level and obstruction-free as is possible without causing impact to intact pre-European geological deposits.

Given the layer of fill covering the site, this methodology should be able to remove all existing structures and services, whilst leaving the majority of fill in place, and the underlying dune layers in the condition pre-demolition.

Geophysical Survey

Ground-penetrating radar (GPR) survey will be conducted across the study area once demolition works are complete. Antennae approximately 500MHz will be used to allow visualisation of the subsurface architecture. Rectangular grids will be established over each cleared area to maximise coverage of the study area. Survey lines will be measured within each grid at up to 2m transect spacings. The acquired data would be processed into two-dimensional radargrams and analysed for stratigraphic boundaries and subsurface objects. The two-dimensional radargrams for each grid would also be compiled into three-dimensional time-slices to enable a plan-view analysis of the subsurface.

Borehole Sampling

The geophysical results will guide the sampling pattern for a borehole survey. Where the geophysical imagery indicates a consistent profile of stratigraphy across the site then a regular grid or offset grid of up to 20m spacing will be sampled evenly over the site (this spacing was successfully used at RSY 1).

Where the geophysical imagery suggests discrete locations of variable subsurface stratigraphy then boreholes would alternatively be placed to sample each zone of variation. The stratigraphic profiles of the collection of boreholes would be used to construct a stratigraphic subsurface model of the study area using the principles of sequence stratigraphy.

Archaeological Salvage

The geological model of the substrate developed from the geophysical and borehole data will be used to guide a sampling strategy for salvage excavation. Only areas identified as including intact geological deposits will be targeted for salvage excavation.

For each discrete area of modelled intact geological deposit (a sample location), the following steps will be undertaken.

- Layers of fill will be mechanically removed under supervision of the excavation director. The extent of fill removed from each sample location will be sufficient to allow safe consequent archaeological excavation. Fill will be stockpiled on site, away from the excavation areas, and/or removed by the proponent. No further sampling, sieving or archaeological work would be undertaken on any fill layers.
- At each sample location, a 1m exploratory square will be excavated at the approximate centre.
- Further exploration squares will be placed around the central square, displaced laterally up to 20m in a grid or grid offset pattern and excavated in the manner listed previously. At most, this would result in the entire Doncaster Avenue PAD being sampled on a 20m square grid.
- Excavation will proceed stratigraphically by hand, in 10cm spits or by stratigraphy, whichever is thinner, to a maximum depth of 150cm, or to a depth otherwise deemed to be safe for the hand excavator and/or able to maintain stability of excavation baulks. This decision will be made by the excavation director and/or Built.
- Wherever an intact dune topsoil unit is encountered during excavation of exploration squares, spit thicknesses through the unit would be reduced to 2cm. Once the dune top soil unit is removed, spit depth can return to 10cm or apparent stratigraphy.
- Exploration square excavation would continue to a depth at which the basal 20cm of a square can be demonstrated to contain zero Aboriginal objects. The decision to cease excavation will be the excavation directors. At a minimum each exploratory square will be excavated 20cm depth.
- A representative from OEH would be invited to attend the site prior to or immediately commencing lateral expansion to allow observation of the exploratory squares and discussion of the likely pattern of expansion.
- The recovery of Aboriginal objects, and/or any Aboriginal archaeological features, from an exploration square will trigger lateral hand expansion of that square *if* the threshold/trigger point is reached. Lateral expansion will continue until the threshold of less than five Aboriginal objects per metre square are being recovered (Section E2.6 defines the trigger point and an Aboriginal object). When the trigger point is no longer met, lateral expansion will cease in that sample location. The decision to cease lateral expansion will ultimately be the excavation directors. Lateral expansion spit depth will depend on the nature of the deposit:
 - Undifferentiated sand layers with an archaeological deposit will be excavated in 10cm spits or by stratigraphy, whichever is thinner, to a maximum depth of 150cm, or to a depth otherwise deemed to be safe (refer above).
 - Intact dune topsoil units will be excavated in the reduced spit thickness of 2cm.

- Archaeological features will be stratigraphically hand excavated and recorded separately from a spit or other stratigraphic unit.
- Should more than five discrete area of modelled intact geological deposit (all containing a deposit which meets the threshold for lateral expansion), and/or the defined total combined extent of the Aboriginal deposit be described over an area exceeding 500m²; the excavation director, OEH, Built and RAPs may need to develop a lateral expansion sub-sampling strategy. The need to sub-sample will be based on recovery of a suitably sized representative archaeological deposit and reasonability in terms of costs associated with the work.
- The depth for the excavation of archaeological deposits is dependent on the stability of the dune in any specific location. If the dune is unstable, preventing hand excavation, and contains an archaeological deposit which meets the trigger points, mechanical excavation may be used as an alternative excavation technique (see below).
- Where Aboriginal objects are found in the lowest hand-excavated spit, benching may need to be undertaken to permit continued hand excavation to deeper levels. Benching through layers with an archaeological deposit may be necessary. If so, the mode of mechanical excavation will follow the mechanical excavation methodology described below.
- Each spit excavated by hand would be passed through a 3mm sieve. All Aboriginal objects will be retained for further analysis. All non-Aboriginal material, with the potential to be contact period objects, will be counted, retained and archived for analysis.
- Wet sieving would be conducted into skips or some other appropriate container to prevent accumulation of water at the ground surface and potential overland flow beyond the study area boundaries. Skips would be emptied on-site at strategic locations to prevent surface water pooling. Should percolation be insufficient to prevent surface water pooling then the skip contents would be transported off-site.
- The following mechanical excavation methodology may be required:
 - Where no (or very few) Aboriginal objects are found to be contained within any exploration squares (and no lateral hand expansion is proposed), strip trenches would be excavated mechanically at locations decided by the excavation director. Trenches would be excavated at 20cm spits to a depth of 150cm. Approximately a quarter of each bucket would be sieved, with the remainder to be sieved should five or more Aboriginal objects be recovered from the first quarter.
 - The same mechanical excavation methodology may be used if: deep excavation (+1.5m) is required; and/or the excavation conditions become unsafe; and/or benching through a layer with an archaeological deposit is required to reach deeper layers and make the site safe.
- Geological samples potentially including but not limited to particle-size analysis, soil micromorphology and plant-organic content will be recovered from an appropriate profile to characterise the soil and/or stratigraphic profile.

- Where a moist organic deposit is found within the intact stratigraphy it will be sampled vertically using PVC pipe for potential pollen analysis. One location will be sampled at a minimum should multiple organic deposits be found.
- Should human skeletal material be identified during the test excavation, work will cease in the immediate area and OEH and the NSW Police Department will be notified.

Development

On completion of salvage excavation, as outlined above, the excavation director will provide a written sign-off to Built indicating that the field investigation defined in an associated AHIP has been satisfied. At this point Built will be able to commence development of the site in accordance with the approved DA. No further AHIP will be required.

E.2.8 Pre-Test or Pilot Survey

Orton notes that the best survey designs can be made when the survey is over and that a pilot survey can serve to remove some of the 'bugs' from the sampling process.⁶ The sampling procedure outlined previously integrates pre-test, or pre-survey, into its design. Each sampling method applied builds on the knowledge of the previous method and informs the design of the next method. The Aboriginal representatives and field archaeologists will be able to collaboratively respond to the results of each method to enhance the design of the next method.

The proposed methodology has been tested during works on the adjacent Randwick Stabling Yards, where it was found to be suitable for investigation of the sand dunes in this area.

E.2.9 Organisation

The demolition monitoring, geophysical survey, borehole sampling and salvage excavation will be undertaken by a team which will include an archaeological excavation director, a qualified geoscientist, four field archaeologists and four Aboriginal representatives (from the Registered Aboriginal Parties [RAP]). A mechanical excavator operator will also be required.

One geoscientist and one RAP will conduct the demolition monitoring, geophysical survey, and borehole sampling. Salvage excavations will be inclusive of the remainder of the team with two people per square hand excavating, and four people sieving.

E.2.10 Summary and Analysis

Following salvage excavation, a technical report will be prepared that contrasts the Doncaster Avenue outcomes against other recent local excavations. If no Aboriginal objects are identified, the report will provide an overview of the techniques applied and their appropriateness.

If Aboriginal objects/sites are identified, the report will provide a synopsis of the sites, their stratigraphical and geomorphological context and provide an overview of the techniques applied and their appropriateness. Any recovered Aboriginal stone objects will be subject to specialist analysis. Recording of all relevant attributes will be undertaken in a comparable manner to other regional lithic studies and in accordance with Holdaway and Stern (2004). Contact period objects would be analysed by a specialist in each field (eg glass or ceramic), taking into account Aboriginal working techniques.

Where required, geological and geospatial analysis will be conducted by GML. Analysis of other materials recovered during field investigations (eg pollen, carbon samples etc) will be undertaken by an

external contractor where required. All other reporting and GIS analysis will be undertaken by GML, assisted by the field archaeologists present during the salvage excavation.

The field investigation report will be provided to the RAPs for review and comment. Following their review the report will be forwarded to the OEH.

All Aboriginal objects will be subject to appropriate management. It is proposed that objects would be reburied directly adjacent to (abutting) the RSY 1 conservation area. The reburial location (measuring 1m square) would be registered as a separate Aboriginal site (termed 'Doncaster Avenue objects reburial location') and managed concurrently with the site RSY 1. Reburial was the nominated method of management from certain Aboriginal community members. However, should the Aboriginal community wish for alternative object management post excavation, a variation to the AHIP can be sought.

An Aboriginal heritage plan of management would be prepared for the continuing protection of the conservation management area. This should contain develop management requirements for any Aboriginal objects recovered and provide means for the public interpretation/dissemination of the work's outcomes and findings. The Aboriginal HMP would form a component of the post excavation report.

E.2.11 Information Gained for Future Survey

The information derived from salvage excavation will be used as the basis for the further development of the heritage values assessment relating to the study area. The report will provide direction for future management and conservation of Aboriginal heritage in the local area.

E.3 Endnotes

- ¹ (OEH) DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010), pp 24–28.
- ² Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge.
- ³ Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, pp 27–39.
- ⁴ (OEH) DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010), pp 24–28.
- ⁵ The National Committee on Soil and Terrain, 2009, *Australian Soil and Land Survey Field Handbook*, third edition, CSIRO Publishing, Melbourne.
- ⁶ Orton, C 2000, *Sampling in Archaeology*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, p 29.