

Figure 5.6 Proposed development of F23 Administration building,

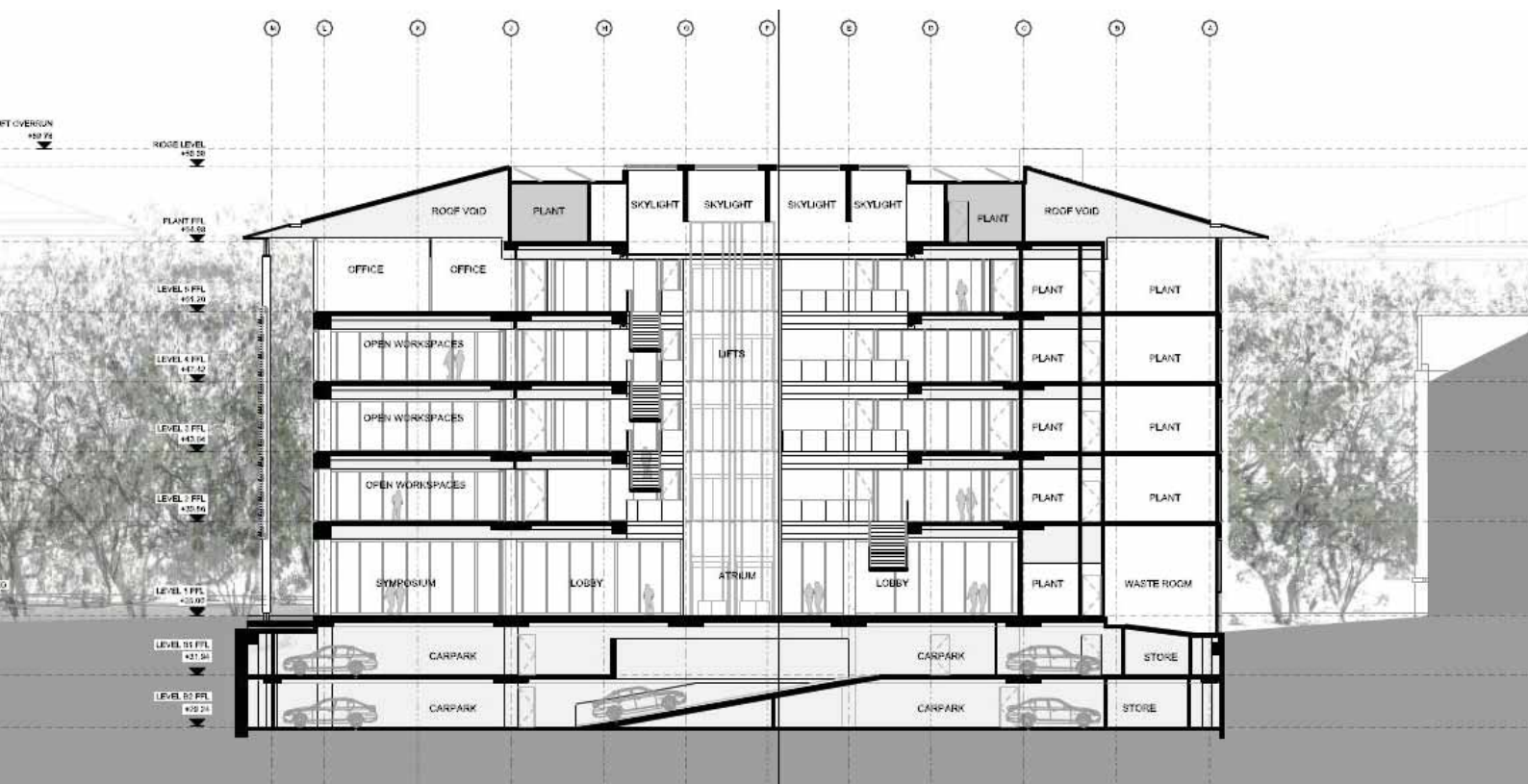


Figure 5.7 Proposed development of F23 Administration building,



**Figure 5.8** Proposed development for F07 (LEES1) proposed Carslaw Extension. (Source: Warren and Mahoney Architects Pty Ltd 2015).

## 6.0 Recommendations and Conclusions

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This due diligence report has identified the following conclusions regarding the Aboriginal archaeology of the study area:

- Past Aboriginal inhabitants are likely to have used the wider university area as a component of their territory.
- Given the small size of the study area and its distance from environmental foci, the study area may have been associated with general resource gathering activities rather than more permanent campsites. This type of past landscape use would have been ephemeral and unlikely to leave an archaeological signature.
- Extensive earth disturbing development has occurred continuously for over 200 years since European settlement of Sydney. This includes forest clearance, farming, grazing, construction of gardens, roads and buildings, the introduction of fill to level and terrace the natural topography of the land, as well as the landscaping and paving of ground surfaces.
- Since 1950, extensive single and multi-storey development has occurred within the two study areas identified in this report. Given the nature of modern engineering and construction methods, the excavation of strip footings and foundations required for large multi-storey buildings is likely to have removed any in situ subsurface Aboriginal archaeological deposits.
- No areas within the current study area can be categorised as undisturbed.
- Previous archaeological investigations have revealed extremely low artefact densities are contained within archaeological deposits within and near the university grounds.
- As the quantity of in situ artefacts from the vicinity of the university is extremely low, any in situ artefacts or sites found within the university would be extremely rare and may hold high archaeological significance.
- Several areas of deep alluvial sediments with the potential to contain Aboriginal objects have been identified in association with Blackwattle Creek and Swamp within 1km of the study area.
- Previous archaeological investigations in surrounding areas near the current study areas have shown that some remnant natural soil horizons are present below historical fill layers on Petersham Hill and within the Darlington campus. However, the historical land use has disturbed the A soil horizons to such an extent that any Aboriginal objects are unlikely to be in situ.
- Geotechnical investigations have indicated that natural soil horizons may be preserved below 3–5m of historical fill in the area associated with the former Orphan School Creek, to the west of the FASS building.
- This assessment has found low to nil potential for Aboriginal objects to occur within the two study areas<sup>57</sup>.

- The Aboriginal community have identified that the wider University of Sydney Camperdown Campus area is of cultural value and significance. This value can be recognised and recorded during the university's campus-wide study of Aboriginal values.

## **6.1 Required Aboriginal Heritage Management**

In order for the proposed works to proceed, a number of Aboriginal heritage management requirements should be undertaken, including provision of the final due diligence Aboriginal heritage assessment to the RAPs.

As the Aboriginal community have identified cultural values which are not directly associated with the study area, this Aboriginal heritage assessment has been updated to record this information and capture the Aboriginal consultation process undertaken before the report was finalised.

The project may proceed with caution (that is, the works as outlined in this assessment associated with F07, F23 and A02 may proceed). An Aboriginal cultural heritage induction should be developed in collaboration with the MLALC. This should include an Aboriginal sites discovery protocol.



## 7.0 Endnotes

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- <sup>1</sup> Department of Environment Climate Change and Water (DECCW) 2010, *National Parks and Wildlife Act 1974. Fact Sheet 1*.
- <sup>2</sup> Department of Planning 2015, *Secretary's Environmental Assessment Requirements*, Attachment SSD7055.
- <sup>3</sup> DECCW, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, Department of Environment, Climate Change and Water, April 2010.
- <sup>4</sup> DECCW (now OEH) 2010, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, pp 24–28.
- <sup>5</sup> DECCW (now OEH) 2010, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, pp 24–28.
- <sup>6</sup> DECCW. 2009, *Due diligence guidelines for protection of Aboriginal objects in NSW*.
- <sup>7</sup> DECCW 2010, *National Parks and Wildlife Act 1974. Fact sheet 2*.
- <sup>8</sup> GML Heritage, University of Sydney Campus Improvement Program Aboriginal Heritage Due Diligence Report, report prepared for University of Sydney, 2013.
- <sup>9</sup> Site card Numbers 45-6-2629 and 45-6-2676.
- <sup>10</sup> In Section 2.0, the 'study area' refers to the area including and surrounding the footprint of SSD7081, SSD7054 and SSD7055.
- <sup>11</sup> Chapman, G and Murphy, C 1989, *Soil Landscapes of the Sydney 1:100 000 Sheet*, Sydney, Soil Conservation Service of NSW, p 30.
- <sup>12</sup> Jo McDonald Cultural Heritage Management, Sydney University Campus 2010: Test Excavations at the Law Building Site, Camperdown Campus and at Maze Green, the Old Darlington School. Darlington Campus, report prepared for Capital Insight Pty Ltd, 2005.
- <sup>13</sup> Jo McDonald Cultural Heritage Management, Sydney University of Campus 2010: Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, 2006, p 7.
- <sup>14</sup> Jo McDonald Cultural Heritage Management, Sydney University of Campus 2010: Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, 2006, p 11.
- <sup>15</sup> Jo McDonald Cultural Heritage Management, Sydney University of Campus 2010: Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, 2006 p 11.
- <sup>16</sup> GML Heritage.
- <sup>17</sup> Barani, 'Aboriginal People and Place', viewed 16 July 2015 <<http://www.sydneymarani.com.au/sites/aboriginal-people-and-place>>.
- <sup>18</sup> JMcDCHM, Sydney University Campus 2010, Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, October 2006, p 16.
- <sup>19</sup> For further details refer to Sections 2.2.5 and 3.1.
- <sup>20</sup> Coffey Geotechnics Pty Ltd, Faculty of Arts and Social Sciences Development (FASS) Initial Geotechnical Site Assessment, report prepared for The University of Sydney 2015.
- <sup>21</sup> Mitchell, PB, Soil materials and geomorphology at The Tin Sheds, University of Sydney, report prepared for Jo McDonald Cultural Heritage Management Pty Ltd, 2006.
- <sup>22</sup> Jo McDonald Cultural Heritage Management 2006, Sydney University of Campus 2010: Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, p 12.
- <sup>23</sup> JMcDCHM, Sydney University of Campus 2010: Test Excavations at the University of Sydney Central Site, Darlington Campus, report prepared for Capital Insight Pty Ltd, p. 6.
- <sup>24</sup> Casey and Lowe 2012, *Archaeological Assessment & Impact Statement: University Accommodation, St Paul's College*, The University of Sydney, report prepared for Citta Property Group, p 11.
- <sup>25</sup> Colley, S, and Attenbrow, V, 'Does technology make a difference? Aboriginal and colonial fishing in Port Jackson, New South Wales.' in *Archaeology in Oceania*, 47, 2012, 69–77.
- <sup>26</sup> Colley, S, 'Fish and fishing in colonial New South Wales: new evidence from the Quadrant site in Sydney in *Post Medieval Archaeology* 47, 2013, 120–136.
- <sup>27</sup> Pearson, M, Marshall, D, Ellsmore, D, Attenbrow, V, Rosen, S, Kerr, R and Betteridge, C 2002, *University of Sydney Grounds Conservation Plan*, Vol. 2, prepared for Facilities Management Office, University of Sydney.
- <sup>28</sup> Jo McDonald Cultural Heritage Management, University of Sydney: ARC Medical Research Building, Indigenous Archaeological Assessment, report prepared for Jones Lang LaSalle, 2007 p 13.
- <sup>29</sup> Jo McDonald Cultural Heritage Management, University of Sydney: Centre for Obesity Diabetics and Cardiovascular Research (CODCD) Project, Aboriginal Heritage Assessment, report prepared for the University of Sydney, 2009 p12.
- <sup>30</sup> Jo McDonald Cultural Heritage Management, Archaeological Survey for an Aboriginal Heritage Assessment, University of Sydney NSW, prepared for Capital Insight Pty Ltd, 2004, p 12.
- <sup>31</sup> That is, SSD7081, SSD7054 and SSD7055.
- <sup>32</sup> Photographs of this are available in Section 3.0

- <sup>33</sup> Jo McDonald Cultural Heritage Management, Sydney University Campus 2010: Test Excavations at the Law Building Site, Camperdown Campus and at Maze Green, the Old Darlington School. Darlington Campus, report prepared for Capital Insight Pty Ltd., pg 5, 2005.
- <sup>34</sup> Jo McDonald Cultural Heritage Management, Sydney University Campus 2010: Test Excavations at the Law Building Site, Camperdown Campus and at Maze Green, the Old Darlington School. Darlington Campus, report prepared for Capital Insight Pty Ltd, 2005.
- <sup>35</sup> Pearson, M, Marshal, D, Ellsmore, D, Attenbrow, V, Rosen, S, Kerr, R and Betteridge, C 2002, *University of Sydney Grounds Conservation Plan*, Volumes 1 and 2.
- <sup>36</sup> Attenbrow, V 2010 (2nd ed) *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, UNSW Press, Sydney; Benson, D and Howell, J 1995, *Taken for Granted: The Bushland of Sydney and its Suburbs*, Kangaroo Press and Royal Botanic Gardens, Sydney; Kohen, J 1986, 'Prehistoric Settlement in the western Cumberland Plain: Resources, environment and technology', unpublished PhD thesis, Macquarie University.
- <sup>37</sup> Pearson, M, Marshal, D, Ellsmore, D, Attenbrow, V, Rosen, S, Kerr, R and Betteridge, C 2002, *University of Sydney Grounds Conservation Plan*, Volumes 1 and 2.
- <sup>38</sup> Dominic Steele Consulting Archaeology 2001, Aboriginal Archaeological Assessment Report, Broadway & Mountain St Development Site, Sydney, report prepared for Australand Holdings Ltd and College Square Residential Pty Ltd, July 2001; Butlin, N 1983, *Our Original Aggression: Aboriginal populations of south-eastern Australia 1788–1850*, George, Allen and Unwin, Sydney.
- <sup>39</sup> City Plan Heritage 2004, University of Sydney SIT: Aboriginal Archaeological Assessment, report to FJMT Architects on behalf of the University of Sydney, p 33.
- <sup>40</sup> Pearson M et al., *University of Sydney Grounds Conservation Plan*, in *Environmental Protection*, Sydney, report prepared for the Facilities Management Office, University of Sydney, 2002.
- <sup>41</sup> GML understands that this report has been superseded by the 2014 University of Sydney Grounds Conservation Management Plan, but advises that the archaeological sensitivity assessment remains the same.
- <sup>42</sup> D Steele & J Czastka, *Archaeological Salvage Excavations at the Quadrant, Broadway.*, report prepared for Australand Holdings., 2003.
- <sup>43</sup> Steele and Czastka.
- <sup>44</sup> JMcDCHM, *Archaeological Survey for an Aboriginal Heritage Assessment*, University of Sydney, NSW, unpublished report prepared for Capital Insight Pty Ltd, June 2004.,
- <sup>45</sup> JMcDCHM, *University of Sydney: Centre for Obesity Diabetics and Cardiovascular Research (CODCD) Project, Aboriginal Heritage Assessment*, unpublished report prepared for the University of Sydney, September 2009.
- <sup>46</sup> Godden Mackay Logan Pty Ltd & JMcDCH Management, *Abercrombie Precinct Redevelopment: Preliminary Aboriginal Archaeological Assessment*, , 2012.
- <sup>47</sup> Biosis Research, 445-473 Wattle Street , *Ultimo: Proposed Student Accommodation Development - Aboriginal Cultural Heritage Assessment Report*, unpublished report prepared for Cultural Resources Management, September 2012, <O:\Consulting\GML Resources>.<sup>47</sup>
- <sup>48</sup> Chapman and Murphy, *Soil Landscapes of the Sydney 1:100,000 Sheet* , p. 30.
- <sup>49</sup> Jo McDonald Cultural Heritage Management, University of Sydney: ARC Medical Research Building, Indigenous Archaeological Assessment, report prepared for Jones Lang LaSalle, 2007, p 34.
- <sup>50</sup> Coffey Geotechnics Pty Ltd, Faculty of Arts and Social Sciences Development (FASS) Initial Geotechnical Site Assessment. Report prepared for University of Sydney, 2015.
- <sup>51</sup> GML Heritage 2013.
- <sup>52</sup> DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*.
- <sup>53</sup> DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*.
- <sup>54</sup> DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, p 10.
- <sup>55</sup> DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, p 10.
- <sup>56</sup> extract from 15-0344mlalcc2 response
- <sup>57</sup> That is, SSD7081, SSD7054 and SSD70555.



## 8.0 Appendices

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### Appendix A

Aboriginal Consultation Log—University of Sydney Buildings F23 & F07





## Aboriginal Consultation Log—University of Sydney Buildings F23 & F07—15-0344

### 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<br>Archaeologist<br>Aboriginal Heritage and<br>Planning<br>Office of Environment and<br>Heritage<br>PO Box 668<br>PARRAMATTA NSW 2124 | 3 July 2015  | 10 July 2015   | Provided a list of Aboriginal stakeholders known to OEH that may have an interest in the project. As it is an SSI, the consultation process should be in accordance with the relevant SEARS issued by the Department of Planning and Environment. | 15-0344oehc1 – email   |
| Local Aboriginal Land Council (LALC)                  | Mr Nathan Moran<br>Metropolitan Local Aboriginal<br>Land Council<br>PO Box 1103<br>STRAWBERRY HILLS NSW<br>2012                                      | 15 July 2015 |                |   | 15-0344mlalcc1 – email |
| The Registrar, <i>Aboriginal Lands Right Act 1983</i> | The Registrar, Aboriginal<br>Land Rights Act PO Box 112<br>GLEBE NSW 2037<br>Att: Ms Megan Mebberson   | 15 July 2015 | 18 August 2015 | The project area did not appear to have Registered Aboriginal Owners pursuant to Division 3 of the ALRA 1983.   | 15-0344alrac1 – email  |
| National Native Title Tribunal (NNTT)                 | National Native Title Tribunal<br>GPO Box 9973<br>SYDNEY 2000<br>Attention: Ms Melissa<br>O'Malley   | 15 July 2015 |                |   | 15-0344nnttc1 – email  |

| Body/Group  | Contact  | Date Sent    | Date Reply    | Comment  | Reference               |
|---|--|--------------|---------------|--|-------------------------|
| Native Title Services Corporation (NTSCORP Limited) | Native Title Services Corporation<br>PO Box 2105<br>STRAWBERRY HILLS NSW 2012  | 15 July 2015 |               |  | 15-0344ntscsc1 – email  |
| Local Council                                       | City of Sydney<br>GPO Box 1591<br>Sydney NSW 2001  | 15 July 2015 | 27 July 2015  | City of Sydney declined GML's request to provide a list of any relevant Aboriginal people/groups who should be consulted with respect to the project.  | 15-0344cscsc1 – email   |
| Greater Sydney Local Land Services (formerly CMA)   | Greater Sydney Catchment Management Authority<br>Greater Local Land Services Office<br>PO Box W274, Parramatta<br>Westfield NSW 2150 | 15 July 2015 | 7 August 2015 | The Greater LLS declined to provide a list of Aboriginal stakeholders but would forward our request to the Advisory committee but advised that this comment on the list by the Advisory Committee would not be in the capacity as the Greater LLS, but would be the suggestion of an individual. | 15-0344gscmac1 – letter |

Approximately 10 days should be allowed for these groups to respond.

### Stage 1, Step 2—Newspaper Advert

| Newspaper       | Date Printed | Reference          |
|-----------------|--------------|--------------------|
| Central Courier | 8 July 2015  | 201500708Tearsheet |

14 days (22 July 2015) must be allowed for Aboriginal people to respond to the newspaper advertisement.

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

| Aboriginal Organisation/Person                         | Contact           | How the name was obtained and any comments | Reference             |
|--|-------------------|--|-----------------------|
| Aaron Broad  |                   | OEHL List of Aboriginal Stakeholders       | 15-0344oehl1 Response |
| Badu   | Karia Lea Bond    | OEHL List of Aboriginal Stakeholders       | 15-0344oehl1 Response |
| Bilinga  | Christopher Payne | OEHL List of Aboriginal Stakeholders       | 15-0344oehl1 Response |
| Darug Aboriginal Cultural Heritage Assessments (DACHA) | Gordon Morton     | OEHL List of Aboriginal Stakeholders       | 15-0344oehl1 Response |

| Aboriginal Organisation/Person | Contact                  | How the name was obtained and any comments | Reference            |
|--------------------------------|--------------------------|--|----------------------|
| Eric Keidge                    |                          | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Goobah Developments            | Basil Smith              | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Gunyu                          | Darlene Hoskins-McKenzie | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Jerrigong                      | Joanne Stewart           | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| MLALC                          | Nathan Moran             | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Munyunga                       | Peter Foster             | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Murrumbul                      | Levi McKenzie-Kirkbright | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Nundagurri                     | Newton Carriage          | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Pemulwuy CHTS                  | Pemulwuy Johnson         | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Tocmwall (tow)                 | Scott Franks             | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Walbunga                       | Hika TeKowhai            | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Wingikara                      | David Bell               | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Wullung                        | Lee-Roy James Boota      | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |
| Yerramurra                     | Robert Parson            | OEH List of Aboriginal Stakeholders        | 15-03444oe1 Response |

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

| Aboriginal Organisation/Person              | Contact                                     | Date Sent    | Reference             |
|---|---|--------------|-----------------------|
| Aaron Broad                                 |   | 16 July 2015 | 15-03444abc1 - letter |
| Badu  | Karia Lea Bond                              | 16 July 2015 | 15-03444bc1 - email   |
| Bilinga                                     | Christopher Payne                           | 16 July 2015 | 15-03444bic1 - email  |
| Darug Cultural Heritage Assessments (DACHA) | Mr Gordon Morton<br>Ms Celestine Everingham | 16 July 2015 | 15-03444cwc1 -email   |

| Aboriginal Organisation/Person | Contact                  | Date Sent    | Reference                |
|--------------------------------|--------------------------|--------------|--------------------------|
| Eric Keidge                    |                          | 16 July 2015 | 15-03444ekc1 - letter    |
| Goobah Developments            | Basil Smith              | 16 July 2015 | 15-03444gdc1 - email     |
| Gunyu                          | Darlene Hoskins-McKenzie | 16 July 2015 | 15-03444gc1 - email      |
| Jerringong                     | Joanne Stewart           | 16 July 2015 | 15-03444jc1 - email      |
| MLALC                          | Nathan Moran             | 16 July 2015 | 15-03444mlalcc1 - email  |
| Munyinga                       | Peter Foster             | 16 July 2015 | 15-03444mc1 - email      |
| Murrumbul                      | Levi McKenzie-Kirkbright | 16 July 2015 | 15-03444mic1 - email     |
| Nundagurri                     | Newton Carriage          | 16 July 2015 | 15-03444nc1 - email      |
| Pemulwuy CHTS                  | Pemulwuy Johnson         | 16 July 2015 | 15-03444pc1 - email      |
| Tocomwall (tow)                | Scott Franks             | 16 July 2015 | 15-03444dachac1 - letter |
| Walbunja                       | Hika Tekowhai            | 16 July 2015 | 15-03444wacc1 - email    |
| Wingikara                      | David Bell               | 16 July 2015 | 15-03444wic1 - email     |
| Wullung                        | Lee-Roy James Boota      | 16 July 2015 | 15-03444wc1 - email      |
| Yerramurra                     | Robert Parson            | 16 July 2015 | 15-03444yc1 - email      |

14 days (30 July 2015) must be allowed for Aboriginal people to register an interest to be consulted.

### Stage 1 Complete—Registered Aboriginal Parties (RAP)

| Aboriginal Organisation/Person             | Contact                   | Date Received and comments | Reference                |
|--|---------------------------|----------------------------|--------------------------|
| Metropolitan Local Aboriginal Land Council | Lee Davison/ Nathan Moran | 20 July 2015—email         | 20150720_Mlcalc response |
| Goobah Developments                        | Basil Smith               | 20 July 2015 - email       |                          |
| Gulaga                                     | Wendy Smith               | 20 July 2015 - email       |                          |
| Murramarang                                | Roxanne Smith             | 20 July 2015 - email       |                          |

| Aboriginal Organisation/Person              | Contact                  | Date Received and comments  | Reference  |
|---|--------------------------|---|------------|
| Cullendulla                                 | Janaya Smith             | 20 July 2015 - email  |            |
| Biamanga                                    | Sell Storer              | 20 July 2015 - email  |            |
| Darug Cultural Heritage Assessments (DACHA) | Celestine Everingham     | 21 July 2015—Phone call to register                                     | Phone call |
| Elouera                                     | Lenard Nye               | 21 July 2015 - email  |            |
| EORA  | Kahu Brennan             | 21 July 2015 - email  |            |
| Badu  | Karia Bond               | 21 July 2015 - email  |            |
| Walbunja                                    | Hika Te Kowhai           | 21 July 2015 - email  |            |
| Wandandian                                  | William Bond             | 21 July 2015 - email  |            |
| Tharawal                                    | Violet Carriage          | 21 July 2015 - email  |            |
| Ngunawal                                    | Edward Stewart           | 21 July 2015 - email  |            |
| Ngarigo                                     | Newton Bond              | 21 July 2015 - email  |            |
| Dharug                                      | Andrew Bond              | 21 July 2015 - email  |            |
| Yerramurra                                  | Robert Parsons           | 21 July 2015 - email  |            |
| Murrin                                      | Tarlara Te Kowhai        | 21 July 2015 - email  |            |
| Thauaira                                    | Shane Carriage           | 21 July 2015 - email  |            |
| Djiringanj                                  | Keith Nye                | 21 July 2015 - email  |            |
| Kurringgai                                  | Toni Brierley            | 21 July 2015 - email  |            |
| Bidawal                                     | Richard Andy             | 21 July 2015 - email  |            |
| Nundagurri                                  | Newton Carriage          | 22 July 2015 – email  |            |
| Gangangarra                                 | Kim Carriage             | 22 July 2015 – email  |            |
| Walgalu                                     | Ronald Stewart           | 22 July 2015 – email  |            |
| Murrumbul                                   | Levi McKenzie-Kirkbright | 23 July 2015 – email – personal details not to be released to OEH/LALCs |            |
| Tocomwall                                   | Danny Franks             | 27 July 2015 - email  |            |



The proponent must provide a copy of the registered Aboriginal parties to the OEH and the LALC within 28 days of the closing data for registering an interest.

## Stage 2—Presentation of information about the proposed project

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

| Aboriginal Organisation/Person   | Date Sent    | Date Reply     | Comments, outcomes and/or issues  | Reference                      |
|--|--------------|----------------|---|--------------------------------|
| Badu - Karia Bond  | 31 July 2015 |                |   | 15-0344 receipt DD Badu        |
| Biamanga - Sell Storer   | 31 July 2015 |                |   | 15-0344 receipt DD Biamanga    |
| Bidawal - Richard Andy   | 31 July 2015 |                |   | 15-0344 receipt DD Bidawal     |
| Cullendulla - Janaya Smith   | 31 July 2015 |                |   | 15-0344 receipt DD Cullendulla |
| Darug Aboriginal Cultural Heritage Assessments (DACHA) - Gordon Morton, Celestine Everingham | 31 July 2015 |                |   | 15-0344 receipt DD DACHA       |
| Dharug - Andrew Bond   | 31 July 2015 |                |   | 15-0344 receipt DD Dharug      |
| Djiringanj - Keith Nye   | 31 July 2015 |                |   | 15-0344 receipt DD Djiringanj  |
| Elouera - Lenard Nye   | 31 July 2015 |                |   | 15-0344 receipt DD Elouera     |
| EORA - Kahu Brennan  | 31 July 2015 |                |   | 15-0344 receipt DD EORA        |
| Gangangarra - Kim Carriage   | 31 July 2015 |                |   | 15-0344 receipt DD Gangangarra |
| Goobah Development Pty Ltd - Basil Smith   | 31 July 2015 |                |   | 15-0344 receipt DD Goobah      |
| Gulaga - Wendy Smith   | 31 July 2015 |                |   | 15-0344 receipt DD Gulaga      |
| Kurringgai - Toni Brierley   | 31 July 2015 |                |   | 15-0344 receipt DD Kurringgai  |
| Metropolitan Local Aboriginal Land Council   | 31 July 2015 | 19 August 2015 | MLALC has no objections to the project proceeding, and identifies that the study area and surrounding areas were, and continue to be important to Aboriginal people. The written correspondence has been provided herein. | 15-0344 receipt DD MLALC       |
| Murramarang - Roxanne Smith  | 31 July 2015 |                |   | 15-0344 receipt DD Murramarang |
| Murrin - Tarlarra Te Kowhai  | 31 July 2015 |                |   | 15-0344 receipt DD Murrin      |

| Aboriginal Organisation/Person   | Date Sent    | Date Reply | Comments, outcomes and/or issues | Reference                     |
|--|--------------|------------|----------------------------------|-------------------------------|
| Murrumbul - Levi McKenzie-Kirkbright                                       | 31 July 2015 |            |                                  | 15-0344 receipt DD Murrumbul  |
| Ngarigo - Newton Bond  | 31 July 2015 |            |                                  | 15-0344 receipt DD Ngarigo    |
| Ngunawal - Edward Stewart  | 31 July 2015 |            |                                  | 15-0344 receipt DD Ngunawal   |
| Nundagurri - Newton Carriage   | 31 July 2015 |            |                                  | 15-0344 receipt DD Nundagurri |
| Tharawal - Violet Carriage   | 31 July 2015 |            |                                  | 15-0344 receipt DD Tharawal   |
| Thauaira - Shane Carriage  | 31 July 2015 |            |                                  | 15-0344 receipt DD Thauaira   |
| Tocomwall - Danny Franks   | 31 July 2015 |            |                                  | 15-0344 receipt DD Tocomwall  |
| Walbunga - Hika Te Kowhai  | 31 July 2015 |            |                                  | 15-0344 receipt DD Walbunga   |
| Walgalu - Ronald Stewart   | 31 July 2015 |            |                                  | 15-0344 receipt DD Walgalu    |
| Wandandian - William Bond  | 31 July 2015 |            |                                  | 15-0344 receipt DD Wandandian |
| Yerramurra - Robert Parson   | 31 July 2015 |            |                                  | 15-0344 receipt DD Yerramurra |
| 28 Days allowed for comments (from the 31 July) – 28 <sup>th</sup> August. |              |            |                                  |                               |

The record of agreed outcomes and/or contentious issues should be supplied to all registered Aboriginal parties. The MLALC identified that the works could proceed, though expressed a concern for Aboriginal objects which may occur within the footprint.

### Stage 3—Seek information from RAPs and Review of Aboriginal Heritage Assessment

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

| RAP                                      | Date Sent    | Date Reply     | Comments and/or cultural values identified  | Reference                       |
|--|--------------|----------------|---|---------------------------------|
| MLALC                                    | 31 July 2015 | 19 August 2015 | <p>Taken from MLALC's response:</p> <p><i>The study area and surrounding areas were used by Aboriginal people of the Gadigal and Wangal clans before and during British arrival. These areas were frequently used in day to day life as part of their land management practices, food gathering, meeting places and ceremonial gatherings. MLALC and the Aboriginal community within its boundaries hold all of its land and the cultural practices that were and are carried out within it of high cultural value and significance.</i></p> <p><i>The cultural practices that were carried out within the study area of this project are no exception.</i></p> <p><i>Although there is low potential of Aboriginal archaeological deposits within the study area, MLALC are concerned for the harm of any such potential Aboriginal objects that may be present and uncovered during ground disturbance, excavation and construction works involved.</i></p> <p><i>However, MLALC has no objections to the project proceeding and look forward to further involvement with the project.</i></p> <p>Therefore MLALC have identified that areas which were used by Aboriginal people are of high cultural value and significance to the Aboriginal community. MLALC also identified a concern for the harm to Aboriginal objects through construction.</p> | 15-0344mlalcc2 response         |
| Murramarang - Roxanne Smith              | 31 July 2015 | 28 August 2015 | <p><i>Our support of methodology is for the project at University of Sydney Buildings, Camperdown. Stage 2 and 3.</i></p>   | 20150828 Roxanne Smith response |
| Goobah Development Pty Ltd - Basil Smith | 31 July 2015 | 28 August 2015 | <p><i>"after much consideration my Elders have decide to inform that they support the Methodology with the inclusion that you convene a on site inspection and discuss the Methodology in detail, please let me know if this is possible."</i></p>  | 20150828 Basil Smith response   |

| RAP                        | Date Sent    | Date Reply     | Comments and/or cultural values identified   | Reference                      |
|----------------------------|--------------|----------------|--|--------------------------------|
| Biamanga - Seli Storer     | 31 July 2015 | 28 August 2015 | <i>Biamanga support the methodology and wish to continue with our expression of interest in the project. I would like to be kept informed of any further developments.</i> | 20150828 Seli Storer response  |
| Cullendulla - Janaya Smith | 31 July 2015 | 28 August 2015 | <i>This is confirmation of support to the proposed methodology and any further interest with the project and participation.</i>  | 20150828 Janaya Smith response |
| Gulaga - Wendy Smith       | 31 July 2015 | 28 August 2015 | <i>We support the methodology associated with the above proposed methodology and wish to be kept informed of all stages of the development</i>                             | 20150828 Wendy Smith response  |

The Aboriginal heritage assessment which was presented to the Aboriginal community was also provided as a mechanism for collecting information about specifically known or identified places of significance to the Aboriginal community. Responses were received from the six RAPs (the end of the review period is the 28<sup>th</sup> August 2015). No specific values were identified that were associated with the study area. GML have recommended that the university should develop an Aboriginal cultural heritage induction with the MLALC, which includes an Aboriginal object/ site/ place discovery protocol.

## Stage 4—Final report sent to RAPs

This due diligence assessment was sent to the following RAPs on 1<sup>st</sup> September April 2015 by email and post.

| Aboriginal Organisation/Person   | Comments | Reference                      |
|--|----------|--------------------------------|
| Badu - Karia Bond  | Email    | 15-0344 receipt DD Badu        |
| Biamanga - Seli Storer   | Email    | 15-0344 receipt DD Biamanga    |
| Bidawal - Richard Andy   | Email    | 15-0344 receipt DD Bidawal     |
| Cullendulla - Janaya Smith   | Email    | 15-0344 receipt DD Cullendulla |
| Darug Aboriginal Cultural Heritage Assessments (DACHA) - Gordon Morton, Celestine Everingham | By post  | 15-0344 DACHA                  |
| Dharug - Andrew Bond   | Email    | 15-0344 receipt DD Dharug      |
| Djiringanj - Keith Nye   | Email    | 15-0344 receipt DD Djiringanj  |
| Elouera - Lenard Nye   | Email    | 15-0344 receipt DD Elouera     |

| Aboriginal Organisation/Person             | Comments | Reference                      |
|--|----------|--------------------------------|
| EORA - Kahu Brennan                        | Email    | 15-0344 receipt DD EORA        |
| Gangangarra - Kim Carriage                 | Email    | 15-0344 receipt DD Gangangarra |
| Goobah Development Pty Ltd - Basil Smith   | Email    | 15-0344 receipt DD Goobah      |
| Gulaga - Wendy Smith                       | Email    | 15-0344 receipt DD Gulaga      |
| Kurringgai - Toni Brierley                 | Email    | 15-0344 receipt DD Kurringgai  |
| Metropolitan Local Aboriginal Land Council | Email    | 15-0344 receipt DD MLALC       |
| Murramarang - Roxanne Smith                | Email    | 15-0344 receipt DD Murramarang |
| Murrin - Tarrarra Te Kowhai                | Email    | 15-0344 receipt DD Murrin      |
| Murrumbul - Levi McKenzie-Kirkbright       | Email    | 15-0344 receipt DD Murrumbul   |
| Ngarigo - Newton Bond                      | Email    | 15-0344 receipt DD Ngarigo     |
| Ngunawal - Edward Stewart                  | Email    | 15-0344 receipt DD Ngunawal    |
| Nundagurri - Newton Carriage               | Email    | 15-0344 receipt DD Nundagurri  |
| Tharawal - Violet Carriage                 | Email    | 15-0344 receipt DD Tharawal    |
| Thauaira - Shane Carriage                  | Email    | 15-0344 receipt DD Thauaira    |
| Tocomwall - Danny Franks                   | Email    | 15-0344 receipt DD Tocomwall   |
| Walbunja - Hika Te Kowhai                  | Email    | 15-0344 receipt DD Walbunja    |
| Walgalu - Ronald Stewart                   | Email    | 15-0344 receipt DD Walgalu     |
| Wandandian - William Bond                  | Email    | 15-0344 receipt DD Wandandian  |
| Yerramurra - Robert Parson                 | Email    | 15-0344 receipt DD Yerramurra  |

## **Appendix E**

University of Sydney Aboriginal Heritage Impact Assessment, prepared by AHMS (February 2016)



**University of Sydney, NSW**

**Aboriginal Heritage Impact Assessment**

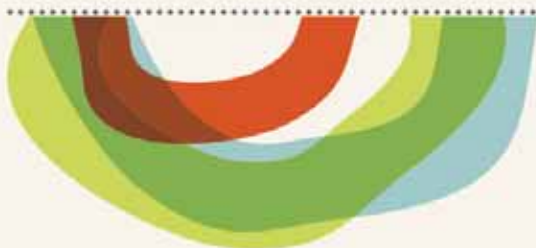
**Report**

**University of Sydney**

**24 February 2016**



**AHMS**  
ARCHAEOLOGICAL & HERITAGE  
MANAGEMENT SOLUTIONS



|                           |  |
|---------------------------|--|
| AUTHOR/HERITAGE ADVISOR   | Alistair Hobbs, Natalie Blake, Alan Williams               |
| PROPONENT                 | University of Sydney                                       |
| PROJECT NAME              | University of Sydney Aboriginal Heritage Impact Assessment |
| REAL PROPERTY DESCRIPTION | Various  |
| DATE                      | 24 February 2016   |

| AHMS INTERNAL REVIEW/SIGN OFF |          |         |               |          |
|-------------------------------|----------|---------|---------------|----------|
| WRITTEN BY                    | DATE     | VERSION | REVIEWED      | APPROVED |
| NB, AH                        | 18.12.15 | 1       | Alan Williams | AW       |
| AW                            | 14.1.16  | 2       | Minor edits   |          |
| AH                            | 24.2.16  | 3       | Minor edits   |          |
|                               |          |         |               |          |

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## Glossary

|  |   |
|--|---|
| Aboriginal Cultural Heritage Assessment (ACHA)   | A document developed to assess the archaeological and cultural values of an area, generally required as part of an Environmental Assessment (EA).   |
| Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010                 | Guidelines developed by OEH to guide formal Aboriginal community consultation undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).  |
| Aboriginal Heritage Impact Permit (AHIP)   | The statutory instrument that the Director General of the Office of Environment and Heritage (OEH) issues under Section 90 of the National Parks and Wildlife Act 1974 to allow the investigation (when not in accordance with certain guidelines), impact and/or destruction of Aboriginal objects. AHIPs are not required for a project seeking approval under Part 3A of the Environmental Planning and Assessment Act 1979. |
| Aboriginal object  | A statutory term defined under the National Parks and Wildlife Act 1974 as, 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains'.                      |
| Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales | Guidelines developed by OEH to inform the structure, practice and content of any archaeological investigations undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).   |
| Department of Environment, Climate Change and Water (DECCW)                                | Now known as the Office of Environment and Heritage (OEH), Department of Premier and Cabinet.   |
| Department of Planning and Environment (DPE)   | The Consent Authority for development applications made in accordance with Part 3A of the Environmental Planning and Assessment Act 1979.   |
| Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales | Guidelines developed by OEH, outlining the first stage of a two stage process in determining whether Aboriginal objects and/or areas of archaeological interest are present within a subject area. The findings of a due diligence assessment may lead to the development of an Aboriginal Cultural Heritage Assessment.  |
| Environmental Assessment (EA)  | A document summarising the assessment of environmental impacts of a development which supports an application for approval under Part 3A of the Environmental Planning and Assessment Act 1979.   |
| Environmental Planning and Assessment Act 1979   | Statutory instrument that provides planning controls and requirements for environmental assessment in the development approval process. The Act is administered by the DPI.   |
| Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community                | Guidelines developed by OEH (then Department of Environment and Conservation) for assessment of Aboriginal heritage when being assessed under Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> . These guidelines are now commonly adopted for assessment   |

|  |  |
|--|--|
| Consultation (DEC 2005)  | in State Significant Development and State Significant Infrastructure projects under Part 4 (Division 4.1) and 5 (Division 5.1) of the <i>Environmental Planning and Assessment Act 1979</i> .   |
| Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW | Guidelines developed by OEH to inform the structure and content of an Aboriginal Cultural Heritage Assessment (ACHA).  |
| Isolated Find  | An isolated find is usually considered a single artefact or stone tool, but can relate to any product of prehistoric Aboriginal societies. The term “object” is used in the ACHA, to reflect the definitions of Aboriginal stone tools or other products in the National Parks and Wildlife Act 1974.  |
| National Parks and Wildlife Act 1974   | The primary piece of legislation for the protection of Aboriginal cultural heritage in NSW. Part 6 of this Act outlines the protection afforded to and offences relating to disturbance of Aboriginal objects. The Act is administered by OEH.   |
| Office of Environment and Heritage (OEH)   | The OEH is responsible for managing the Aboriginal Heritage (and other) provisions of the National Parks and Wildlife Act 1974.  |
| Potential Archaeological Deposit (PAD)   | An area assessed as having the potential to contain Aboriginal objects. PADs are commonly identified on the basis of landform types, surface expressions of Aboriginal objects, surrounding archaeological material, disturbance, and a range of other factors. While not defined in the National Parks and Wildlife Act 1974, PADs are generally considered to retain Aboriginal objects and are therefore protected and managed in accordance with that Act. |
| Proponent  | A corporate entity, Government agency or an individual in the private sector which proposes to undertake a development project.  |



## ABBREVIATIONS

|          |  |
|----------|--|
| AHIA     | Aboriginal Heritage Impact Assessment                                      |
| AHIMS    | Aboriginal Heritage Information Management System                          |
| AHIP     | Aboriginal Heritage Impact Permit  |
| AHMS     | Archaeological and Heritage Management Solutions                           |
| BP       | Before present (AD 1950)   |
| CHL      | Commonwealth Heritage List   |
| CIP      | Campus Improvement Program   |
| DP       | Deposited Plan   |
| DPE      | Department of Planning and Environment                                     |
| EP&A Act | Environmental Planning and Assessment Act 1979                             |
| EPBC Act | Environment Protection and Biodiversity Conservation Act 1999              |
| GML      | Godden Mackay Logan  |
| JMcDCHM  | Jo McDonald Cultural Heritage Management                                   |
| ka       | Abbreviation for thousands of years ago (e.g. 1 ka equals 1,000 years ago) |
| MLALC    | Metropolitan Local Aboriginal Land Council                                 |
| LALC     | Local Aboriginal Land Council  |
| LEP      | Local Environmental Plan   |
| LGA      | Local Government Area  |
| NHL      | National Heritage List   |
| NPW Act  | National Parks and Wildlife Act 1974                                       |
| OEH      | Office of Environment and Heritage (formerly DECCW)                        |
| PAD      | Potential Archaeological Deposit   |
| RAP      | Registered Aboriginal Party  |
| WHL      | World Heritage List  |

## Executive Summary

Archaeological & Heritage Management Solutions Pty Ltd (AHMS) has been commissioned by the University of Sydney to prepare an Aboriginal Heritage Impact Assessment (AHIA) for the proposed development of six precincts across the Camperdown and Darlington Campuses, NSW (hereafter referred to as the 'subject area'), as part of the Campus Improvement Program (CIP). The CIP is a seven year program (2014-2020), looking to update teaching facilities, increase floor space and increase student accommodation. The University of Sydney has implemented the initial stages of the approval process under Part 4 (Division 4.1) of the *Environmental Planning and Assessment Act 1979*. It is highlighted that while the AHIA focusses on the six CIP precincts, it also considers the wider Camperdown and Darlington Campuses, especially in relation to identification of cultural values through discussions with the Aboriginal stakeholders.

This AHIA addresses the requirements in the brief to identify any known items and places of Aboriginal cultural heritage value within the subject area, the likelihood of unknown Aboriginal objects being present, and areas of key risk for the proposed development. The report also documents the results of the cultural values identified through liaison with the Registered Aboriginal Parties (RAPs) and the local Aboriginal community.

### Key Findings

- Numerous archaeological assessments have been undertaken within the University of Sydney and the surrounding area (**Section 6.2**). These investigations have generally revealed very low artefact densities within heavily disturbed contexts.
- Previous research and ethnographic information suggests that the university grounds were used only ephemerally or transiently in the past. Typically, large creeklines or swamps would have formed the focus of long-term or repeated occupation, and neither types of resource are within the subject area.
- Aboriginal Heritage Information Management System (AHIMS) database search results demonstrate that evidence of Aboriginal occupation in the general vicinity of the university is limited, and usually expressed as low density artefact scatters, isolated objects and/or Potential Archaeological Deposits (PADs). While PADs have previously been registered within the university grounds, these areas have been reassessed as having low archaeological potential following archaeological testing. These findings are, however, constrained by the limited investigations that have occurred in the heavily urbanised Sydney CBD.
- Two registered Aboriginal sites have been identified within the University of Sydney, #45-6-2745 (USYD Law PAD1) and #45-6-2822 (USYD: Central). Both sites comprise isolated stone artefacts recovered from disturbed contexts. The artefacts were assessed as having low scientific significance and low research potential. Both sites have been destroyed.
- Existing information suggests that much of the subject area is heavily disturbed by historical activities. This disturbance has reduced or removed the potential for cultural materials to be present. In the unlikely event that in-situ deposits are identified, they are likely to be of local or State significance.
- Geotechnical investigations undertaken within the university grounds indicate that natural soil horizons may be preserved below 3-5 m of fill in areas in close proximity to the former Orphan School Creek beneath the western portion of the Life Sciences, and Health Precincts. At this stage it is uncertain as to the full extent of disturbance caused by the

placement of fill in these areas. Using precautionary principles, it is assumed these deposits remain intact until proven otherwise. Given their proximity to a water course, these deposits are also considered to have potential for cultural materials to be present.

- With the exception of the western portion of the Life Sciences, and Health Precincts, it is considered that the remaining precincts would have low potential for cultural materials to be present.

## **Cultural Values**

Consultation with the Aboriginal community identified six places retaining cultural values within the subject area. These include the Macleay Museum, Shellshear Museum in the Anderson Stewart Building, Mackie Building, the Quad, the Koori Centre, the Sports Ovals and the University entrances. Discussions also identified the land encompassing the two sports ovals as an area of potential significance. Participants in the cultural values workshop considered that this would have been a former hunting ground for Gadigal/Cadigal Aboriginal people. The ovals were discussed as having potential to contain subsurface archaeological deposits capped by fill. However, the Sports Ovals are located outside any of the Precinct boundaries and will therefore be unaffected by the current development work.

The Aboriginal groups also described general cultural values and issues including better opportunities for Aboriginal students, the desire for better education and interpretative opportunities relating to past and contemporary Aboriginal history in the University grounds.

## **Potential Aboriginal Heritage Impact**

Based on the information available for the subject area, it is considered that cultural materials would be likely to be composed of low density artefact scatters, isolated finds and/or PADs in close proximity to water sources. Disturbance plays a key role in the survival of such deposits, and in the case of the university past impacts have been extensive. Based on this, it is considered that only two precincts, within the current proposal: Life Sciences and Health, have the potential for cultural materials to be both present and to have survived historical activities. Both of these precincts have been identified on precautionary principles, assuming natural soil profile being present beneath a substantial layer of over-burden.

The specific development within the two precincts has yet to be adequately defined, but references to underground car-parking and the likely need for deep foundations of future structures suggest that impact to these deposits is likely. Appropriate measures to manage these deposits have been provided in **Section 8.4**.

The other four precincts are not considered to have potential for Aboriginal objects to be present, and as such proposed works are considered to have of low risk in harming/destroying cultural materials.

No areas identified as having cultural values would be directly or indirectly affected by the proposed development.

## **Recommendations**

The following recommendations are made in regard to future management of the six Precincts outlined in the CIP:

- As a condition of approval, a Heritage Management Plan (HMP) should be developed for the project. The HMP should be developed in consultation with DPE, OEH and the RAPs, and provide protocols, procedures and tasks to manage the cultural resources identified in this AHIA before, during, and after the development. The HMP should make specific reference to:
  - Management of the Life Sciences (west of Ross Street) and Health Precincts, which have the potential for deeply buried cultural materials to be present (areas of the Life Science precinct east of Ross Street are subject to another SSD application, and are not considered here). Ideally, such works should be undertaken prior to any approval under Section 89J of the *Environmental Planning and Assessment Act 1979* and integrated into the AHIA, and recommendations modified accordingly. Should this prove unfeasible, further sub-surface investigation and salvage (if required) of these deposits should be developed and outlined in the HMP.
  - The remaining precincts are considered to have low potential for Aboriginal objects to be present. These areas should be managed through unexpected finds procedures to be developed and outlined in the HMP.
- Opportunities exist to reflect contemporary Aboriginal values through a range of possible initiatives that have been identified through consultation of the AHIA. It is recommended that an interpretation strategy is developed as a condition of consent to explore and implement expressions of Aboriginal cultural value across the university grounds.
- The site status of #45-6-2745 and #45-6-2833 should be updated in the AHIMS Registrar to reflect their destruction.

# 1 INTRODUCTION

The University of Sydney (the proponent) (**Table 1**) has prepared a Campus Improvement Program (CIP) to redevelop six precincts situated within the Camperdown and Darlington campuses (hereafter, referred to as the 'subject area'). The University of Sydney has implemented the initial stages of the approval process under Part 4 (Division 4.1) of the *Environmental Planning and Assessment Act 1979*. As part of this approval, Department of Planning and Environment (DPE) has identified the need to undertake further consideration of Aboriginal heritage. Specifically, 'Condition 10' of the Secretary's Environmental Assessment Requirements (SEARs) outlined the need to identify Aboriginal heritage values within the subject area, and liaise with the Aboriginal community (see **Section 1.1** below for details).

As a result, Archaeological and Heritage Management Solutions Pty Ltd (AHMS) has been commissioned by the University of Sydney to undertake an Aboriginal Heritage Impact Assessment (AHIA) for the six CIP precincts in advance of proposed development. While the AHIA focusses on the six CIP precincts, it also considers the wider Camperdown and Darlington Campuses, especially in relation to identification of cultural values through discussions with the Aboriginal stakeholders.

This AHIA has been prepared in accordance with relevant Office of Environment and Heritage (OEH) guidelines, most notably *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010), and *Guide to investigating, assessing and reporting Aboriginal Cultural Heritage in NSW* (DECCW, 2011).

**Table 1. Proponent Details**

| Proponent  | Archaeological Consultant   |
|--|---|
| The University of Sydney<br>NSW, 2006<br>Contact Person: Ian Kelly<br>E: ian.kelly@sydney.edu.au | Archaeological and Heritage Management Solutions Pty Ltd<br>Level 2, 729 Elizabeth St, Waterloo, 2017<br>Contact person: Alan Williams<br>T. 02 9555 4000<br>E: awilliams@ahms.com.au |

## 1.1 Purpose of the Assessment

The purpose of this AHIA is to satisfy the requirements outlined in the SEARs. Specifically, 'Condition 10', of the SEARs highlights the following requirements for the project:

- *All Aboriginal cultural heritage values that exist within the development site shall be identified, described and documented. The may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to investigation, assessing and reporting Aboriginal Cultural Heritage in NSW (DECCW, 2011) and in consultation with OEH officers.*
- *Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented.*
- *Where relevant, impacts on Aboriginal cultural heritage values are to be assessed and documented. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any*

*objects recorded as part of the assessment must be documented and notified to OEH.*

In order to meet these requirements, the principle tasks of this AHIA are to:

- Background review of environmental information, including soils, geology and geomorphology.
- Background review of previous archaeological studies in the region, including a search of the OEH AHIMS database
- Identification of landforms of archaeological interest within and near the study area.
- Development of a predictive archaeological model using the above information.
- Development of an impact assessment (over-laying the proposed development with the archaeological findings).

In addition the report aims to achieve the following:

- Identify and assess the significance of known and potential Aboriginal heritage items/places and objects by undertaking background research and investigations.
- Implement an effective strategy to involve Aboriginal community stakeholders in all stages of the Aboriginal Heritage Assessment.
- Establish the Aboriginal cultural heritage sites and values within the CIP precincts, as informed by background research and Aboriginal stakeholders through both written advice and a cultural values workshop with local and traditional owner representatives.
- Report on significant places of high known or potential Aboriginal heritage value, recommending how such places should be conserved, as informed by stakeholders in the Aboriginal community.
- Cultivate suitable and culturally-informed land use and management options for significant Aboriginal cultural heritage items. Such items include cultural landscapes, sites of cultural importance, objects, historical places, places that contain spiritual properties, and places that hold community importance, as informed by Aboriginal stakeholders.

## 1.2 Subject Area

The primary address of the subject area is the University of Sydney, Camperdown, NSW situated within the City of Sydney LGA (**Figure 1**). The subject area incorporates two adjacent campuses: the Camperdown campus covering an area of ~0.35 km<sup>2</sup> and situated between Parramatta Road and City Road which turns into King Street; and Darlington campus that covers an area of ~0.18 km<sup>2</sup> and is situated on the southern side of City Road and bounded by Abercrombie Street.

Based on the CIP plan (**Figure 2**), three precincts are situated within each campus. The Darlington campus incorporates the Merewether Precinct, City Road Precinct and Engineering Precinct. These precincts are bordered to the north by Cleveland Street, to the northwest by City Road, to the east by Shepherd Street and to the south by Darlington Lane and Butlin Avenue. The Camperdown campus contains the Health Precinct, Life Sciences Precinct and Cultural Precinct. These precincts are bordered to the north by Parramatta Road, to the east by parts of the University of Sydney



Camperdown Campus, to the west and south by the Royal Prince Alfred complex and to the south by St Andrew's College.

### 1.3 Proposed Development

The six CIP precincts proposed to be developed are highlighted in **Figure 2**. While the building footprint and envelopes have been previously approved (SSD #6123), the full design and details of the buildings are still being designed. The CIP is a seven year program 2014 -2020, looking to update teaching facilities, increase floor space and increase student accommodation. Based on information provided the proposed development work within these six precincts includes but is not limited to the following:

#### A. Merewether Precinct - Darlington Campus

- Faculty of Arts & Social Sciences
- International Studies
- Redevelopment of the Merewether building
- Redevelopment of the Regiment building
- Mixed use precinct which may incorporate, but not limited to, student accommodation and, retails and parking

#### B. City Road Precinct - Darlington Campus

- Currently accommodates existing Faculty of Architecture (Wilkinson), student accommodation (International House) and administrative functions/libraries in the Jane Foss Russell and Wentworth buildings.
- To accommodate a variety of future uses incorporating faculty, student accommodation and professional service units.

#### C. Engineering Precinct - Darlington Campus

- Upgrade of teaching, learning and research facilities, open space, gateways and ancillary uses
- New development for food and beverage, loading dock and chemistry building
- Refurb for function space

#### D. Health Precinct - Camperdown Campus

- Multi-function research and education centre
- A new Health precinct to incorporate redevelopment of the Blackburn-Bosch group of buildings for co-location of the faculties of Nursing and Midwifery, Health Sciences, an components of Medicine, Pharmacy, and Dentistry.

- Accommodate a mixed use development which may include public-facing health clinics, shared learning and teaching spaces, library facilities, some residential accommodation, and basement parking.
- Provide future connections to the adjoining RPA west of the precinct, and the Charles Perkins Centre (under construction) north of the precinct.

#### **E. Life Sciences Precinct - Camperdown Campus**

- Co-location of vet sciences, agriculture, biological sciences
- Ross Street development and McMaster extension
- Grandstand
- Development of Grandstand D on oval No.2 for SUSF
- Multi-functional space for events, high performance gym, cricket nets, events/ function space and amenities.
- A new Life Sciences precinct to incorporate redevelopment of Gunn, McMaster and the temporary demountable buildings to facilitate co-location of a number of faculties and schools such as Veterinary Sciences, Agriculture & Environment, and Biological Sciences.
- To accommodate learning and teaching, research and ancillary basement parking

#### **F. Cultural Precinct - Camperdown Campus**

- Relocating biosciences to Health Precinct
- Consolidate museums and art
- New Cultural Precinct to convert the heritage significant Science Road area as a principal visitor destination precinct accommodating cultural, museum and heritage components.
- Internal refurbishment of the Macleay and Edgeworth-David buildings in developing a museum and cultural exhibition centre, and incorporating minor building additions.

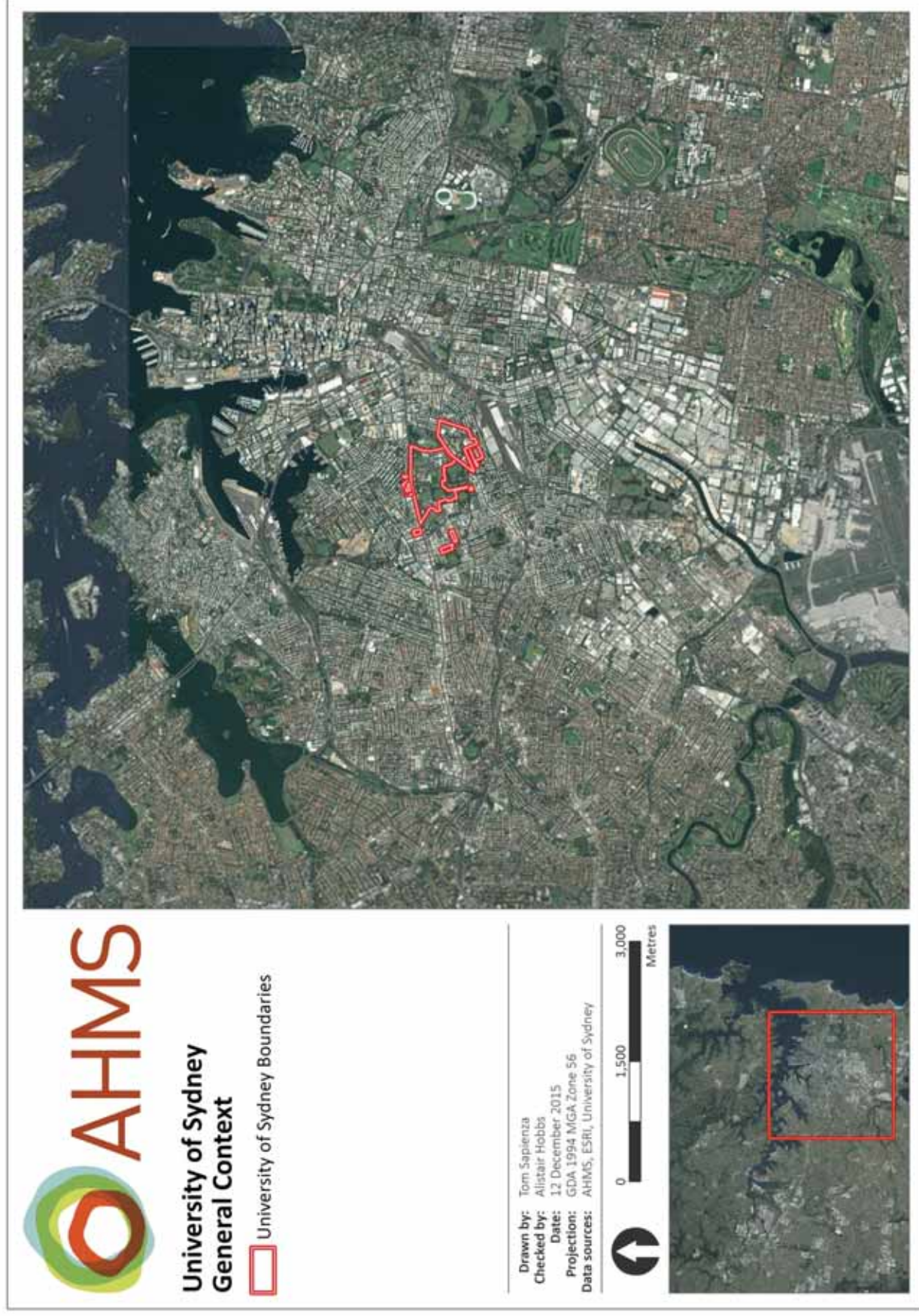
## **1.4 Limitations**

This report is based on existing and publically available environmental and archaeological information, reports about the subject area, and relevant site visits. It did not include any independent verification of the results or interpretations of externally sourced reports (except where the site inspection and field survey indicated inconsistencies). This report includes some predictions about the probability of sub-surface archaeological materials occurring within certain landforms of the subject area. The predictions are based on surface indications noted during the field investigation, and environmental context. It is acknowledged, however, that sub-surface materials may survive in landscape contexts despite surface and environmental indicators that may suggest that they do not. The converse also applies.

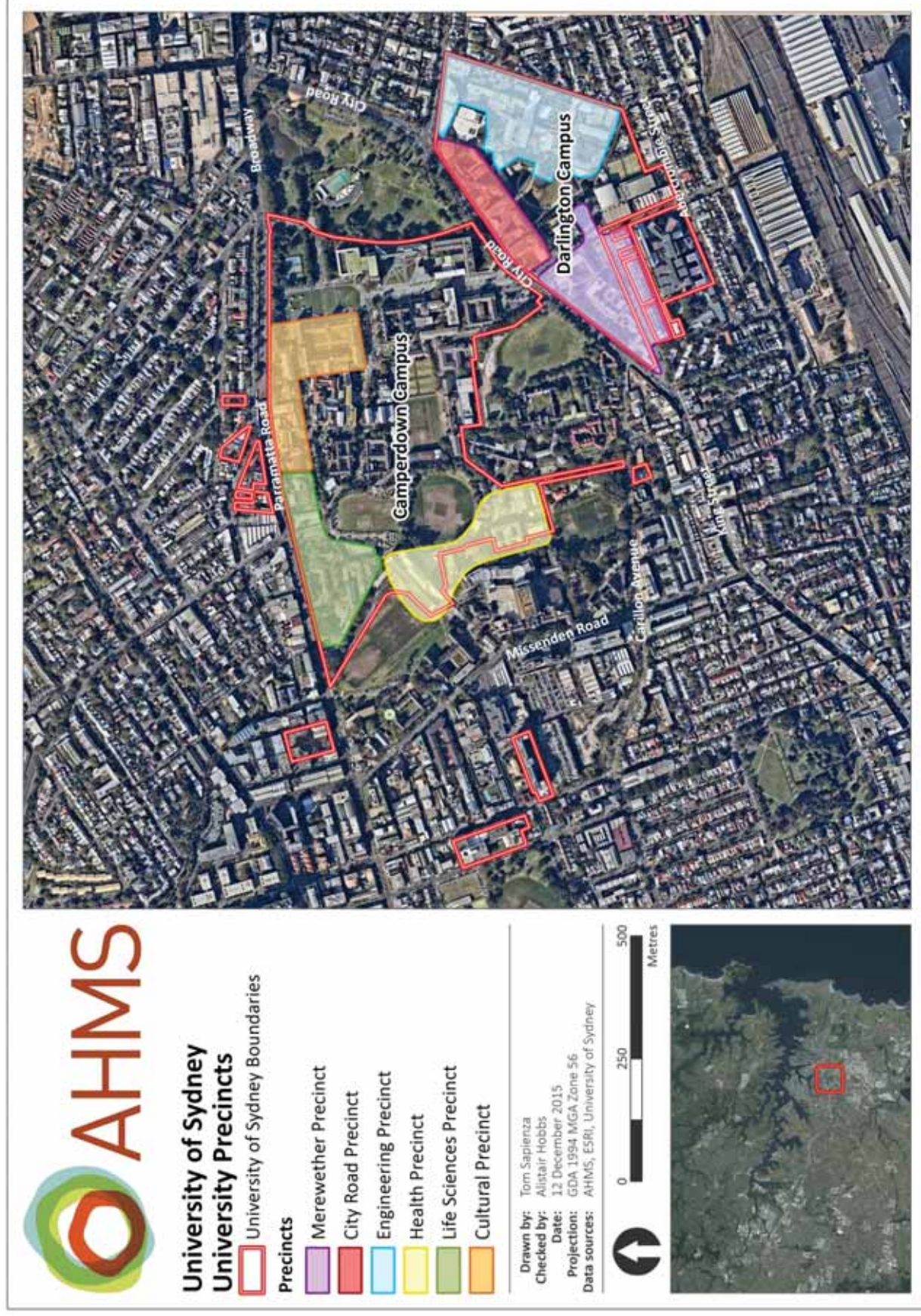
The Aboriginal Heritage Information Management System (AHIMS) data was provided to AHMS by OEH. Information in the archaeological assessment report reflects the scope and the accuracy of the AHIMS site data, which in some instances is limited.

## **1.5 Investigator and Contributors**

This report was written by Alistair Hobbs and Natalie Blake (AHMS Heritage Advisors). Technical and QA reviews were provided by Alan Williams. The cultural values workshop was undertaken by Susan McIntyre-Tamwoy (AHMS Associate Director) and Ben Christensen (AHMS Heritage Advisor). All maps and images were prepared by Tom Sapienza (AHMS Heritage Advisor) unless otherwise specified.







## 2 STATUTORY CONTEXT

### 2.1 Commonwealth Legislation

#### 2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides for the protection of natural and cultural heritage places. The Act establishes (amongst other things) a National Heritage List (NHL) and a Commonwealth Heritage List (CHL). Places on the NHL are of outstanding natural or cultural significance at a national level and can be in public or private ownership. The CHL is limited to places owned or controlled by the Commonwealth which have significant heritage value.

Places listed on the NHL are considered to be of State and local heritage value, even if State or local various heritage lists do not specifically include them.

The heritage values of places on the NHL or the CHL are protected under the provisions of the EPBC Act. The Act requires that the Minister administering the EPBC Act assess any action which has, will have, or is likely to have, a significant impact on the heritage values of a listed place. The approval (or rejection) follows the referral of the matter by the relevant agency's Minister.

*No Aboriginal sites or places within the subject area are currently listed on the NHL or CHL.*

#### 2.1.2 Native Title Act 1993

The *Native Title Act 1993* provides recognition and protection for native title. The Act established the National Native Title Tribunal to administer land claims by Aboriginal people. The Act also provides for Indigenous Land Use Agreements, which allow native title claimants and/or holders control over the use and management of affected land and waters. The

A search of the National Native Title Tribunal Registers was undertaken on 26 August 2015, and returned the following results in the subject area:

| Register Type NNTT                         | Tribunal File Number |
|--|----------------------|
| National Native Title Register             | Nil                  |
| Register of Native Title Claims (RNTC)     | Nil                  |
| Unregistered Claimant Applications         | Nil                  |
| Register of Indigenous Land Use Agreements | Nil                  |

#### 2.1.3 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* was enacted to preserve and protect areas (particularly sacred sites) of particular significance to Aboriginal Australians from injury or desecration. Steps necessary for the protection of a threatened area are outlined in a gazetted Ministerial Declaration (Sections 9 and 10). This can include preventing or controlling development.

As well as providing protection to areas, objects can also be protected by Declaration under the provisions of the Act, in particular Aboriginal skeletal remains (Section 12). Although this is a Federal Act, it can be invoked on a State or Territory level if the State or Territory is unwilling or unable to provide protection for such sites or objects.

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



## 2.2 NSW State Legislation

### 2.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires that environmental impacts are considered in land use planning, including impacts on Indigenous and non-Indigenous heritage. Various planning instruments prepared under the Act identify permissible land use and development constraints.

Where development approval is to be determined under Part 4 (Division 4.1) of the EP&A Act, further approvals or permits to disturb or destroy Aboriginal objects and places under the *National Parks and Wildlife Act 1974* are not required. In those instances, management of Aboriginal heritage follows the applicable Aboriginal heritage requirements specified in the environmental assessment requirements for the proposed development issued by the Director-General of the Department of Planning and Environment (DGRs), and subsequent Conditions of Consent.

### 2.2.2 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides blanket protection for Aboriginal objects (material evidence of Indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community) across NSW. An Aboriginal object is defined in Section 5 of the NPW Act as:

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

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

One declared Aboriginal Place is located near the subject area. Collingwood Precinct is located approximately 1.5 kilometres to the north of the subject area, and will not be impacted by the proposal.

The provisions of the NPW Act that require various approvals or permits to disturb or destroy Aboriginal objects and places are not applicable to Part 4 (Division 4.1) Projects.

### 2.2.3 Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* allows for the transfer of ownership of vacant Crown land that is not required for an essential purpose or for residential land to an Aboriginal Land Council. These lands are then managed and maintained by the Local Aboriginal Land Council.

*No places within the subject area are currently subject to a claim under the Aboriginal Land Rights Act 1983.*

## 3 ABORIGINAL COMMUNITY CONSULTATION

### 3.1 General

Consultation with the Aboriginal communities within the region has been undertaken in accordance with procedures set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the Guidelines), developed by OEH. A complete log of actions and correspondence regarding Aboriginal community consultation is included in Appendix 1.

The 2010 guidelines have six broad phases:

- Pre-notification – identification of the Aboriginal parties by contacting various State government agencies.
- Notification – contacting identified Aboriginal parties and advertising in the local print media for interested Aboriginal parties.
- Presentation of Project – advising the Registered Aboriginal Parties (RAPs) of the project, which phase may involve meetings and/or site visits.
- Methodology – providing the RAPs with the proposed field methodology and information on obtaining cultural knowledge.
- Impacts and Mitigation Options – discussion of potential impacts to heritage and appropriate mitigation options before developing the report.
- Report review – review of the final report.

The consultation process for this project has two aims. Firstly, to comply with the OEH consultation procedures to obtain input on our proposed assessment methodology, our assessment report and management recommendations; and secondly, to identify cultural places and values, that may be affected by the proposed future development of the subject area, through consultation with knowledge holders. To maximise the opportunity to achieve the second aim a cultural values workshop was held with representatives of the local Aboriginal community, including key organisations from the suburbs neighbouring the University campus.

All consultation is provided in detail in **Appendix 1**.

### 3.2 Pre-Notification Stage

The initial stage of the consultation process consists of the identification of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and places. On 2 September 2015, the following organisations were contacted with a request for information:

- The Office of Environment and Heritage;
- Metropolitan Local Aboriginal Land Council;
- Office of the Registrar, Aboriginal Land Rights Act, 1983;
- National Native Title Tribunal;
- NTSCorp;



- City of Sydney Council; and
- Greater Sydney Local Land Services (formerly Sydney Metro Catchment Management Authority).

The responses received are reproduced in **Appendix 1**. In summary, the following groups and individuals were identified as possibly having an interest in the subject area:

- Metropolitan LALC
- Darug Aboriginal Cultural Heritage Assessments (DACHA)
- Tocomwall
- Eric Keidge
- Gunyuu
- Walbunja
- Badu
- Goobah Developments
- Wullung
- Yerramurra
- Nundagurri
- Murrumbul
- Jerringong
- Pemulwuy CHTS
- Aaron Broad
- Munyunga
- Bilinga
- Murrinbul
- Wingikara
- Wongai

### **3.3 Notification and Registration of Interest**

On 23 September 2015, notifications and invitations to register were also sent to the Aboriginal Parties identified in the first stage of consultation, listed above. On 1 October 2015, a notice was placed in the City Hub Newspaper, containing notification of the project, and an invitation to register an interest.

Registrations of interest were received from the following Aboriginal Parties:

- Metropolitan LALC
- Darug Aboriginal Cultural Heritage Assessments
- Darug Land Observations
- Larry Hoskins
- Goobah
- Murramarang
- Biamanga
- Gulaga
- Cullendulla
- Central Murrumbidgee
- Murrumbidgee

In accordance with Section 4.1.6 of the Guidelines, details of the Registered Aboriginal Parties were provided to OEH and the Metropolitan LALC on 26 October 2015.

### 3.4 Aboriginal Cultural Values Workshop

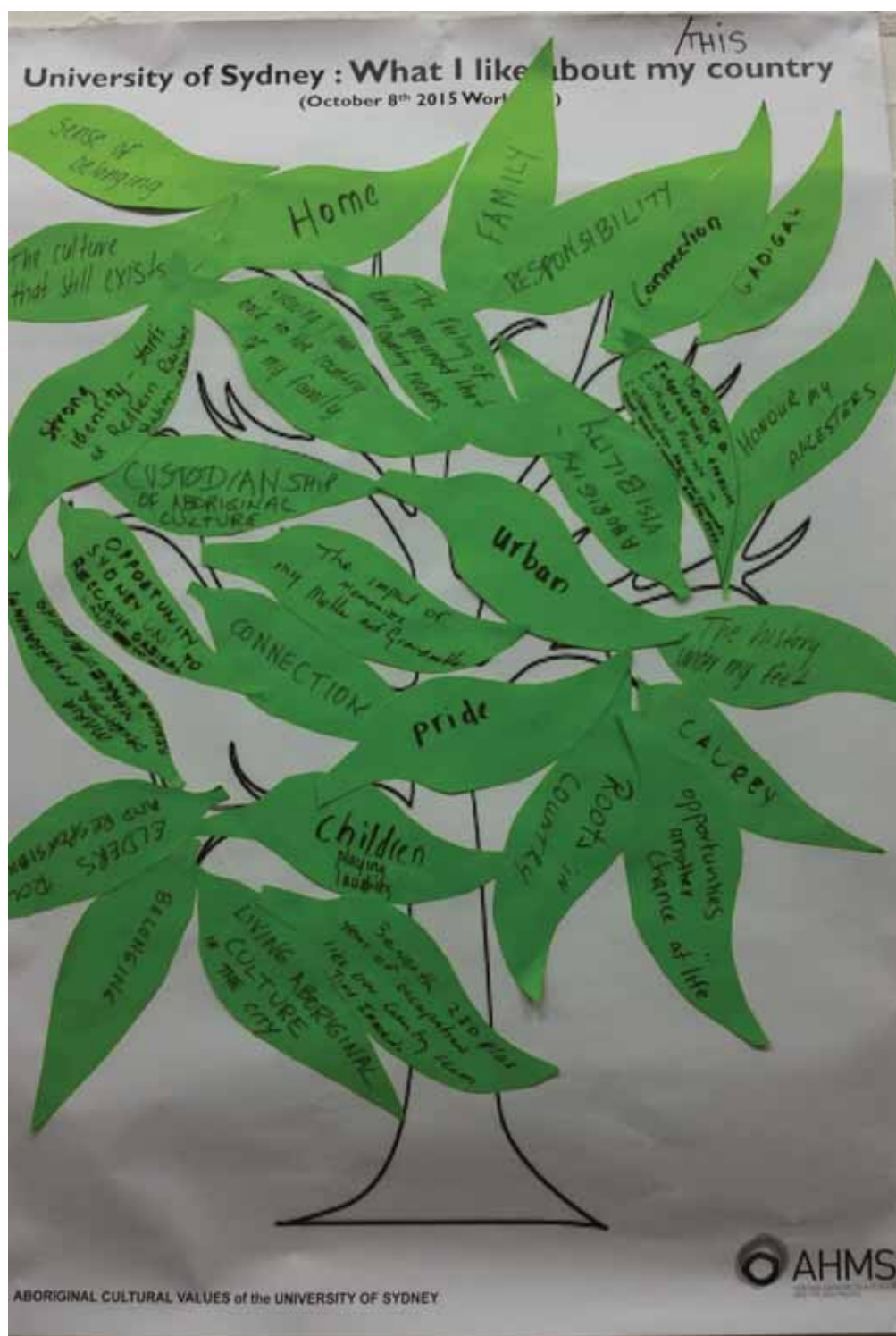
To meet the requirements outlined in the SEARs (see **Section 1.1**), this project provided an opportunity for the Aboriginal people to discuss the cultural values of the subject area through the OEH notification process. In addition a cultural values workshop was held on 8 October 2015 at the University of Sydney to which local community representatives were invited. **Table 2** provides the details of those who attended the Aboriginal cultural values workshop. The full details of the workshop are provided in **Appendix 1**.

**Table 2.** *Cultural Values workshop attendance.*

| Organisation                  | Staff Member          |
|-------------------------------|-----------------------|
| University of Sydney          | Julie parsons         |
|                               | Ian Kelly             |
| AHMS                          | Susan McIntyre-Tamwoy |
|                               | Ben Christensen       |
| Metropolitan LALC             | Nathan Moran          |
| Mudgin-gal                    | Bronwyn Penrith       |
| USYD Indigenous SRC           | Georgia Mantle        |
| City of Sydney Advisory Panel | Norma Ingram          |
| DACHA                         | Gordon Morton         |
| The Settlement                | Gloria Donohue        |
| Aboriginal Housing Company    | Lani Tuitavake        |

The Aboriginal cultural values workshop explored cultural values, current issues related to cultural heritage values and places of cultural value within the University of Sydney. The workshop started with a welcome to country by Nathan Moran. A general introduction to cultural values and a background to the project was provided to participants. Aboriginal participants then reflected on the cultural values that they believe are embedded in the University in its landscape and neighbourhood

context. This exercise stimulated thinking on what was important to Aboriginal people and in some cases what had been lost and what might be recovered. For the purposes of this exercise we did not distinguish between the precincts proposed for re-development but rather considered the University as a whole.



**Figure 3:** An overview of Aboriginal cultural values for the University of Sydney.

Keeping those values in mind participants were asked to consider whether there were any particular locations related to these values and if so to annotate a large aerial photograph of the subject area

with places of particular or potential cultural interest or concern to them. The resulting map was a composite of places nominated by participants that had social or cultural values (**Figure 5**). The areas identified as having social and cultural value were as follows:

1. Macleay Museum - Aboriginal remains are stored in the museum.
2. Victoria Park - Originally a natural water source was located here. Archibald Liversidge (Geologist and Mineralogist) collected stone artefacts and sent them to the British Museum, which kept them. One of the artefacts in the collection is labelled 'Victoria Park'. Site #45-6-2767 (Tent Embassy) is also registered within Victoria Park, and remains an area of value to the community. (Note: this land is outside the boundaries of the University of Sydney).
3. Shellshear Museum, Anderson Stewart Building - Aboriginal remains are stored in the museum.
4. Main University Entrances - The entrances of the university are considered culturally valuable as a marker/gateway for entering onto Aboriginal land.
5. The Quad - It was reported that anecdotal evidence from the Aboriginal student body held that this area was culturally valuable, and may have been where ceremonies were held. A subsequent review of historical information revealed no evidence to support this suggestion, however as enduring symbol of the university it is likely that the Quad may have historic symbolism for the Aboriginal community (especially graduates) as it does for the non-Indigenous graduate population.
6. Sports Ovals - Near the former Orphan School Creek. This land was considered to be Gadigal/Cadigal hunting ground for Aboriginal people in the past and may contain subsurface archaeological deposits capped by later landfill.
7. Mackie Building - Originally the location of the Aboriginal Education Centre. The Mackie Building is the place where some of the first talks about modern Aboriginal Australia were undertaken following the 1967 referendum.
8. Koori Centre - A place of social and cultural value for Aboriginal people, because it is a venue designed specifically for Aboriginal community to study. Currently located in the Old Teachers College.

During the cultural values workshop, the historic location of Mr Shepherd's Nursery was mentioned as an area of potential cultural value that the participants would like AHMS to consider further. Accordingly historical documentation was consulted. This revealed that Thomas Shepherd's Darling Nursery estate was located in the area east of City Road/Darlington Road, part of which is now occupied by the Engineering Precinct (i.e. it is outside of the subject area). It did not include Cadigal Green.

The Sports fields and ovals were discussed as having potential to contain subsurface archaeological deposits; these areas are discussed in further detail in **Section 6.3.7**. These areas were originally highlighted in the University of Sydney Ground Conservation Plan (2002), as areas that exhibited limited disturbance. Subsequently, JMcDCHM (2007 - 2009) undertook surface investigation of these areas, and considered them to only have low archaeological potential. Based on the discussions undertaken with the RAPs, these areas remain highlighted in this AHIA for their cultural values.



**Figure 4** Ben Christensen and Bronwyn Penrith discuss the maps of the university campus

### 3.5 Report Review

To ensure that RAPs who did not attend the cultural values workshop (**Section 3.4**) were consulted in relation to the project, and to obtain feedback on the AHIA, a draft version of this report was provided to all RAPs for review. The review period was undertaken between 18 January 2016 and 15 February 2016. Responses provided by the RAPs following the report review period are included in the consultation log (**Appendix 1-1**) and response section (**Appendix 1-5**)

Comments provided by the RAPs were generally positive and included the following:

Darug Land Observations (DLO) commented that any recovered artefacts should be re-buried on Country (the study area). DLO also wished to be involved in the monitoring of topsoil removal from archaeologically sensitive areas within the study area.

Darug Aboriginal Cultural Heritage Assessments (DACHA) confirmed they were satisfied with the report and recommendations.

Feedback was also provided by Aboriginal Archaeology Service (AAS), who raised concerns about the Aboriginal community consultation process. Dissatisfaction was expressed by the group even though consultation guidelines were followed for the project (please refer to **Section 3.1**). AAS provided no specific information on cultural values for the study area and did not raise any issues with the proposed management strategy and recommendations.



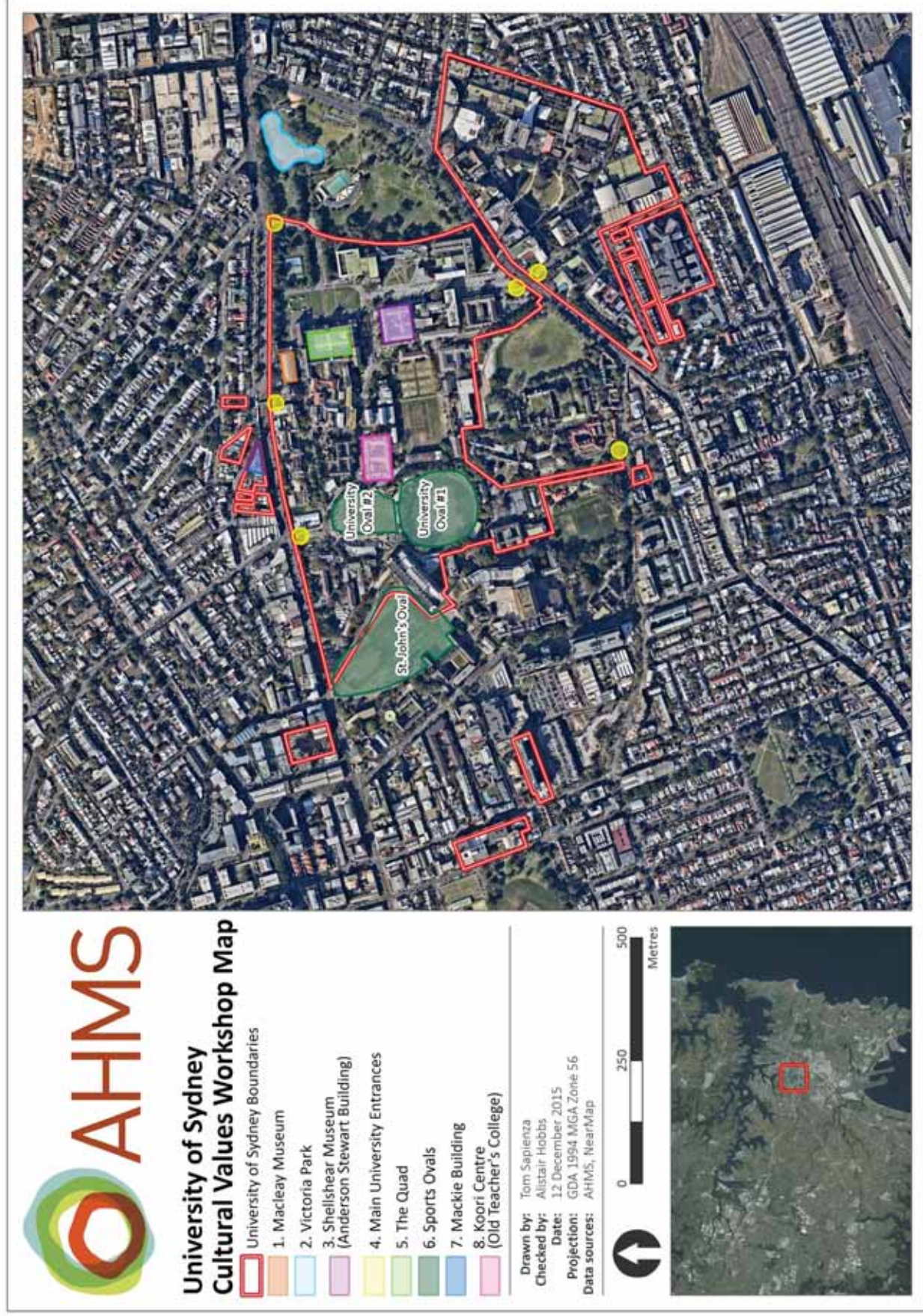


Figure 5 Results of the Aboriginal cultural values workshop.

## 4 LANDSCAPE AND LANDUSE CONTEXT

Describing environmental characteristics is an essential initial step in identifying how people used land in the past, and establishes a context for identifying the archaeological potential of any given area. It also assists to explain why certain historical events may have occurred and why certain historical themes may apply or dominate in a particular area. The environmental context of the subject area is discussed below.

### 4.1 Bioregion

The subject area is located within the Sydney Basin Bioregion, on the central east coast of NSW. Bioregions are large, geographically distinct areas that are distinguished from one another based on differences in geology, landform patterns, climate, ecological features and plant and animal communities. Bioregions are often further classified into finer-scale subregions, with localised differences in geomorphology and vegetation (Thackaway and Crasswell 1995).

The subject area is part of the Cumberland subregion, which is characterised by the gently undulating shale-based landscape of western Sydney that naturally supports grey box, forest red gum, narrow-leaved ironbark woodland with some spotted gum on the shale hills and swamp oak in low-lying flood-prone areas (Morgan 2001).

From a historical perspective, the Cumberland subregion was suitable for settlement and pastoralism in the 19th century. The large river systems running through the Cumberland subregion would also form key resources along which Aboriginal activity would likely have occurred.

### 4.2 Soils and Geology

The subject area is located within the residual Blacktown soil landscape (**Figure 6**). The Blacktown soil landscape occurs extensively across the Cumberland subregion, and is characterised by gently undulating rises with broad rounded crests and ridges on Wianamatta Group Shale. It comprises shallow to moderately deep soils (<150cm) on crests, upper slopes and well-drained areas. Deep soils (150-300cm) occur on lower slopes, drainage depressions and in localised, poorly drained areas. Topsoils reach a depth of up to 30cm, and contain significant sand and silt content overlying hard-setting clay subsoils (OEH 2015).

In most areas, soil deflation and erosion tends to expose, rather than bury, former land surfaces on which stone artefacts may have been deposited (this is a contributing factor to the large number of Aboriginal artefacts recorded as surface finds on this soil type across western Sydney). These types of soils are often shallow, and can be significantly disturbed by historical and modern activities. This has significant implications for the survivability of historical and Aboriginal deposits. Further, it is rare for these types of soil to contain significantly deep, stratified or old archaeological deposits.

### 4.3 Hydrology

Historic plans have shown the upper reaches of several creeks running into Port Jackson have their headwaters within the university grounds. Blackwattle Creek, which runs to Blackwattle Bay began where the Darlington School now stands. Another tributary began in Victoria Park and both of these ran northeast through Glebe, Chippendale and Ultimo. On the western side Orphan School Creek was present and located immediately west of the extant ovals (**Figure 7**).

Of these watercourses, the only remaining visible element is the modified and landscaped Victoria Park Lake, Lake Northam, located at the junction of Parramatta and City Road. This was first landscaped as part of the University of Sydney grounds in 1870.



These watercourses would have provided natural resources for both Aboriginal and historic settlement and movement through the region. However, it is considered unlikely that the former Blackwattle swamp would have been used as a camping ground. The ridgeline running across Petersham Hill, elevated above the swampy ground and with views across the surrounding landscape, would have been a more favourable location.

#### 4.4 Flora and Fauna

The natural vegetation of a landscape is an important consideration, because it provided Aboriginal people with resources which they could exploit. Bark from trees could be stripped to make canoes, shields and other utilitarian items. The vegetation itself provided food resources, as well as habitat for animals, such as possums and birds, which could in turn be hunted for their meat, fur and feathers.

Remnant vegetation communities within the Sydney Basin Bioregion include Shale Plains Woodland, Alluvial Woodland, and Shale/Gravel Transition Forest. These communities would have covered much of the study area at the time of European contact, and were the most common type of native vegetation in the Cumberland subregion. However, they have been extensively disturbed by land clearance and weed invasion, and now occur mostly as small and fragmented patches (Department of the Environment, Water, Heritage and the Arts 2010:4-5).

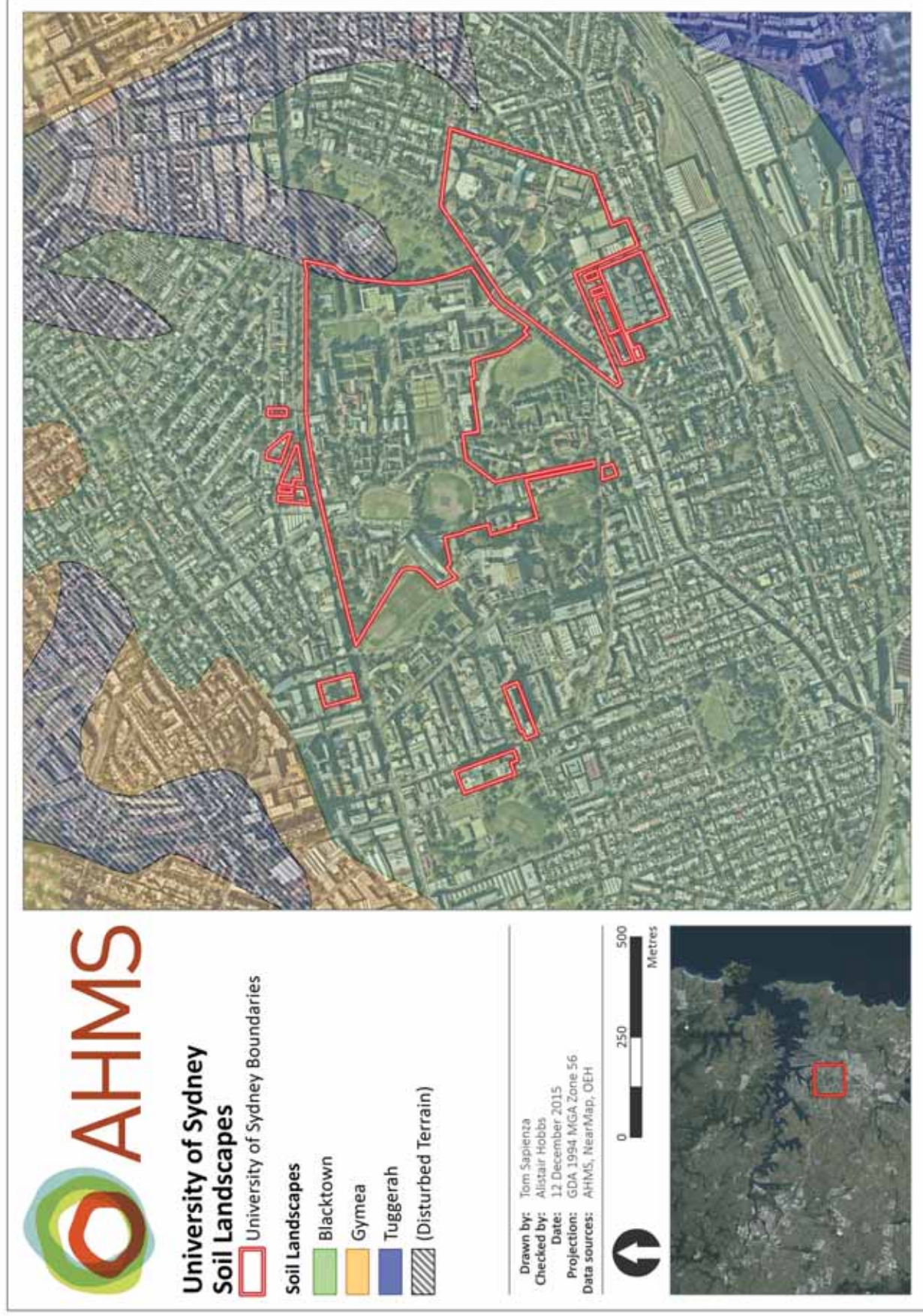
From an Aboriginal heritage perspective, remnant and old growth vegetation is important for two reasons: 1) it is in these locations that culturally modified trees (if present) may be found; and 2) these areas have been subject to fewer disturbances in the last 200 years. Native vegetation typical of the Cumberland subregion is outlined below (**Table 3**).

Today, the subject area comprises land that has been extensively developed and little resembles the original landscape. The subject area has been cleared of vegetation, with the six precincts showing a range of built and re-landscaped environments.

**Table 3. Native vegetation in the Cumberland subregion (after Morgan (2001); The Royal Botanic Gardens and Domain Trust (2015))**

| Location                   | Vegetation   |
|----------------------------|--|
| Shale hills                | Grey box ( <i>Eucalyptus moluccana</i> ), forest red gum ( <i>E. tereticornis</i> ), narrow-leaved ironbark woodland with some spotted gum ( <i>E. crebra</i> , <i>Corymbia maculata</i> ) |
| Alluvial sands and gravels | Hard-leaved scribbly gum ( <i>Eucalyptus sclerophylla</i> ), rough-barked apple ( <i>Angophora floribunda</i> ), and old man banksia ( <i>Banksia serrata</i> )                            |
| River flats                | Broad-leaved apple ( <i>A. subvelutina</i> ), cabbage gum ( <i>E. amplifolia</i> ) and forest red gum with abundant swamp oak ( <i>E. tereticornis</i> , <i>Casuarina glauca</i> )         |
| Lagoon and swamps          | Tall spike-rush ( <i>Eleocharis sphacelata</i> ), and juncus (rushes) with Parramatta red gum ( <i>E. parramattensis</i> )   |







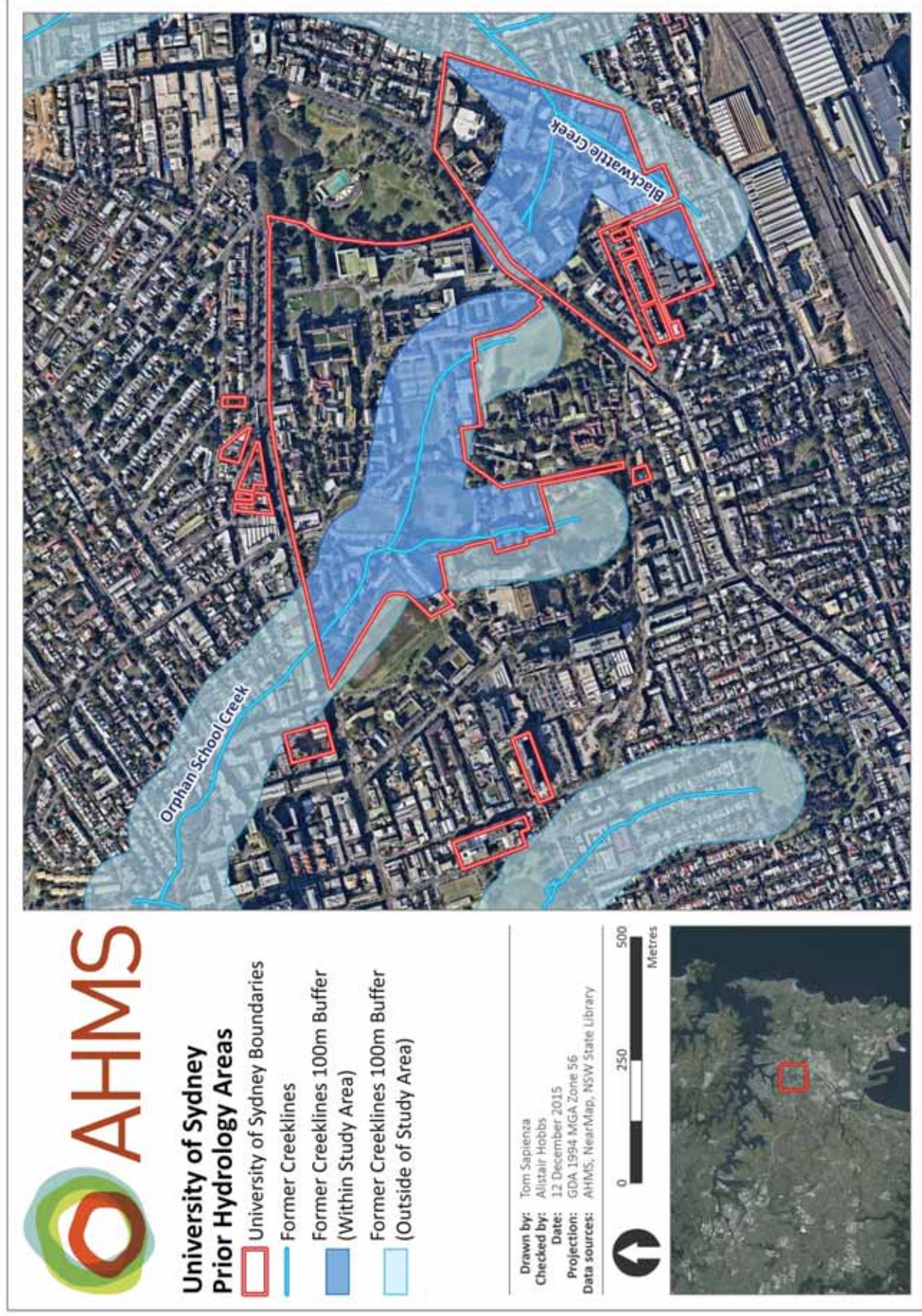


Figure 7. Previous watercourses known within the subject area prior to land disturbance and modification.

## 4.5 Land Use History

The history of the University of Sydney has been well documented by previous assessments over the years. It is clear from these previous assessments that the majority of the natural ground surface has been subject to extensive disturbance as a result of ongoing development and expansion associated with the university. These impacts include but are not limited to major land clearance and modification, cutting and filling activities, installation of utilities and services and the construction and demolition of buildings.

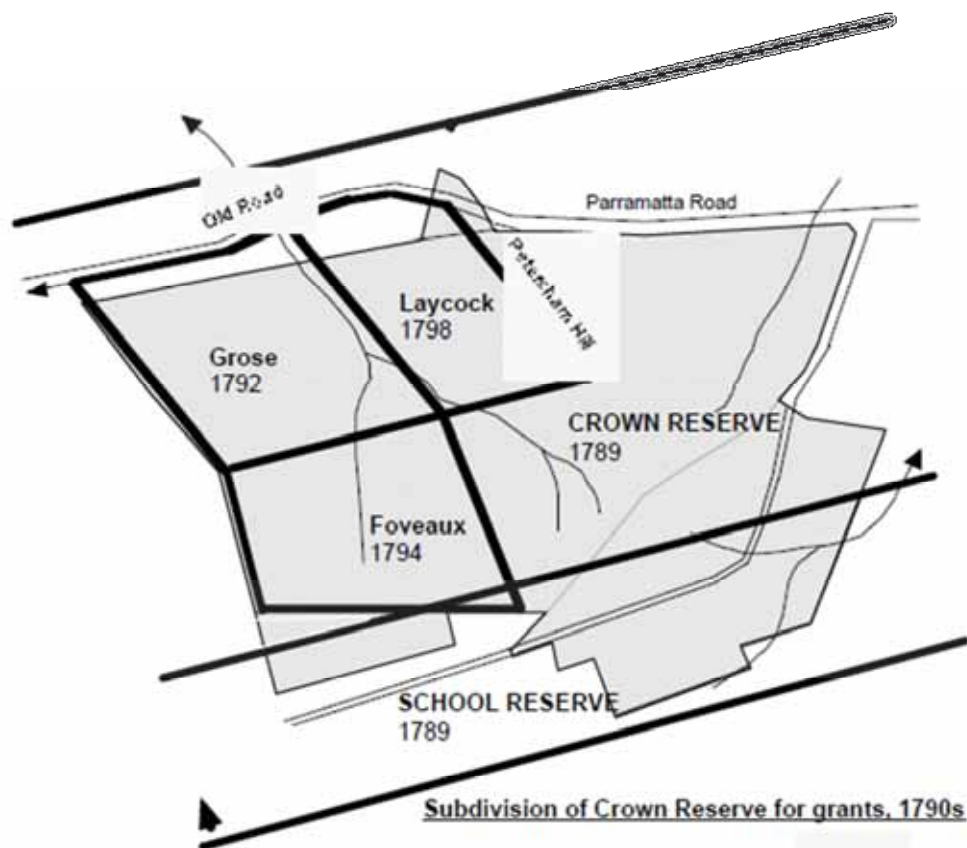
The following summary provides a timeline of the land use history regarding the development and expansion of the university grounds (**Table 4**).

**Table 4.** *Land use summary of the university grounds (after GML 2013: 11-12.)*

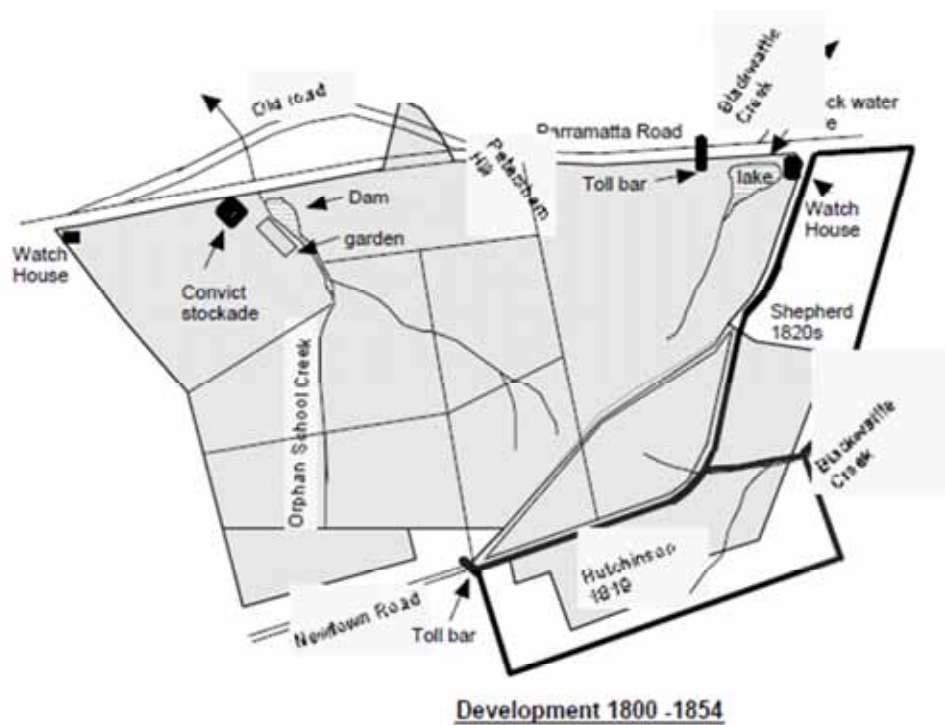
| Dates         | Land Use Summary   |
|---------------|--|
| Pre 1788      | Prior to European settlement, the Camperdown and Darlington campuses were occupied by Aboriginal people of the Cadigal and/or Wanngal clans.   |
| 1788-1790s    | In 1788, part of the 'Kangaroo Ground' was set aside as reserves for Crown, church and school purposes and used for pasturage of stock.  |
| 1790s-1800    | In 1792, 30 acres of the 400 acre Crown Reserve was granted lease to Lieutenant-Governor Francis Grose of the NSW Corp). Grose had originally planned to build a house on the land but changed the purpose of the lease to farming. Grose sold his lease when he left the colony in 1794 but the area became known as Grose Farm ( <b>Figure 8</b> ).  |
| 1800s-1850    | In 1801, further portions of land within the School and Crown reserves were granted to the Female Orphan Institution, who set up a farm on what became known as Orphan School Creek. A number of structures were constructed on Grose Farm including convict stockades, farm buildings, gardens and dams. The areas continued to be used for cultivation and grazing. Over the following years the land was further subdivided and in 1850 the University of Sydney was founded ( <b>Figure 9, Figure 13</b> ).  |
| 1850s-1900    | In 1878 the Darlington Public School was constructed at Maze Crescent (formerly Darlington Road) in the swampy areas of the headwaters of Blackwattle Creek. Several university and school buildings, gardens and recreation ovals were constructed later across the site. Further disturbance associated with the development of the university included landscaping, demolitions of existing structures and insertion of footings and foundations of new buildings. Extensive fill was also introduced to raise the level of the areas previously covered by the Blackwattle swamp ( <b>Figure 10, Figure 14, Figure 15</b> ). |
| 1900s - 1950s | The areas in the northwest corner of the university including Orphan School Creek flats were covered with 3 - 5m of spoil fill obtained from the construction of the city railway during the   |



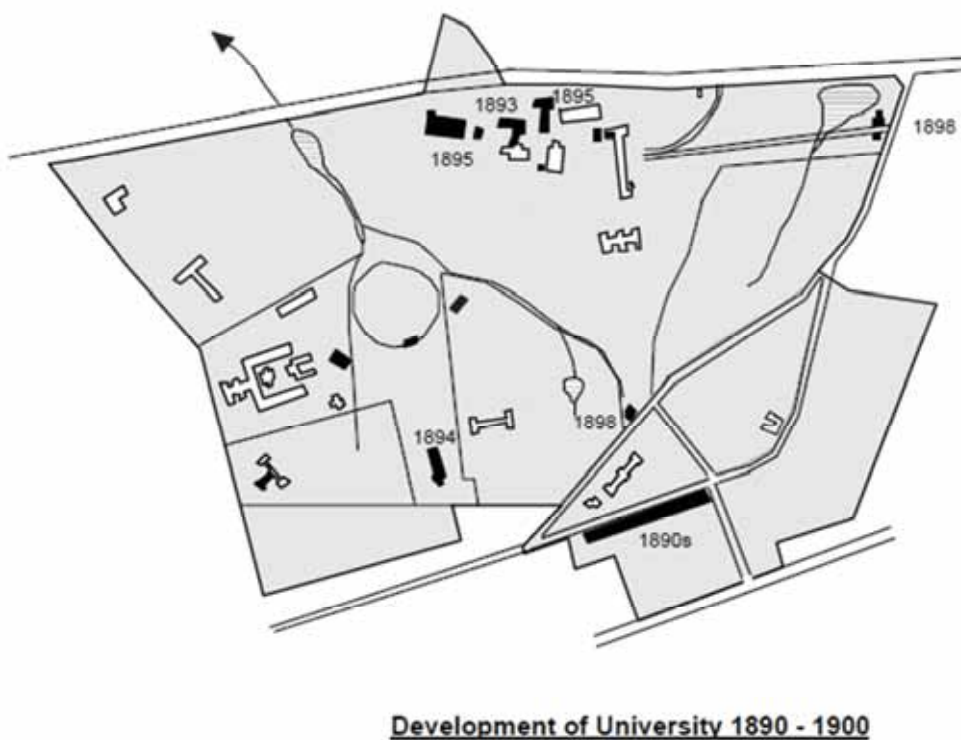
| Dates          | Land Use Summary  |
|----------------|---|
|                | 1920s. A number of air raid shelters were also constructed across the university grounds and Victoria Park during WWII ( <b>Figure 11, Figure 16</b> ). |
| 1960 - present | The university has continued to expand with much of the once open space now been subject to development ( <b>Figure 12</b> ).                           |



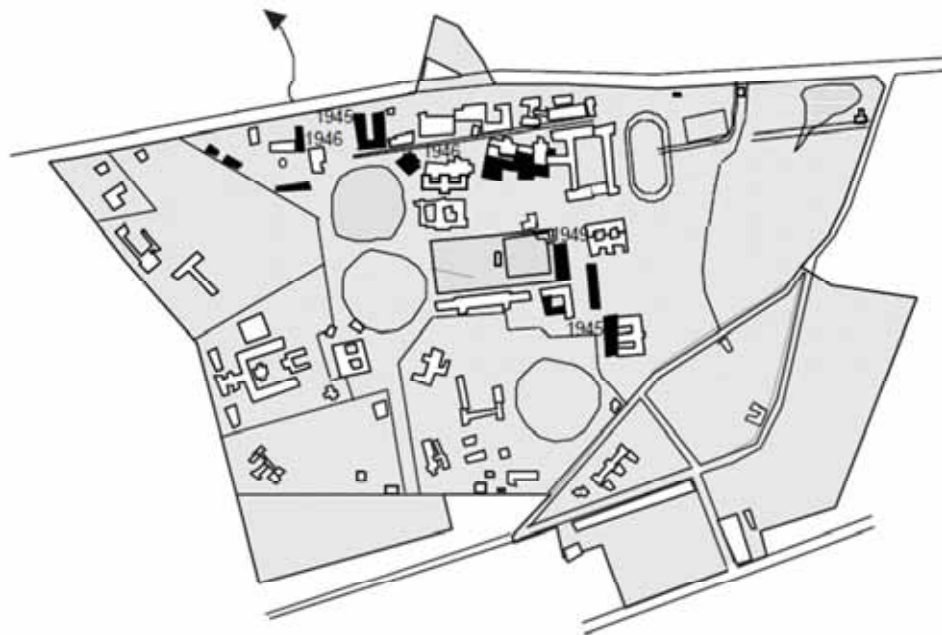
**Figure 8.** Original subdivision of the 'Kangaroo Ground'. (Source: University of Sydney Grounds Conservation Plan Section 2.2)



**Figure 9.** *Development of the subject area prior to the land being granted to the university, 1800-1854 (Source: University of Sydney Grounds Conservation Plan Section 2.2).*

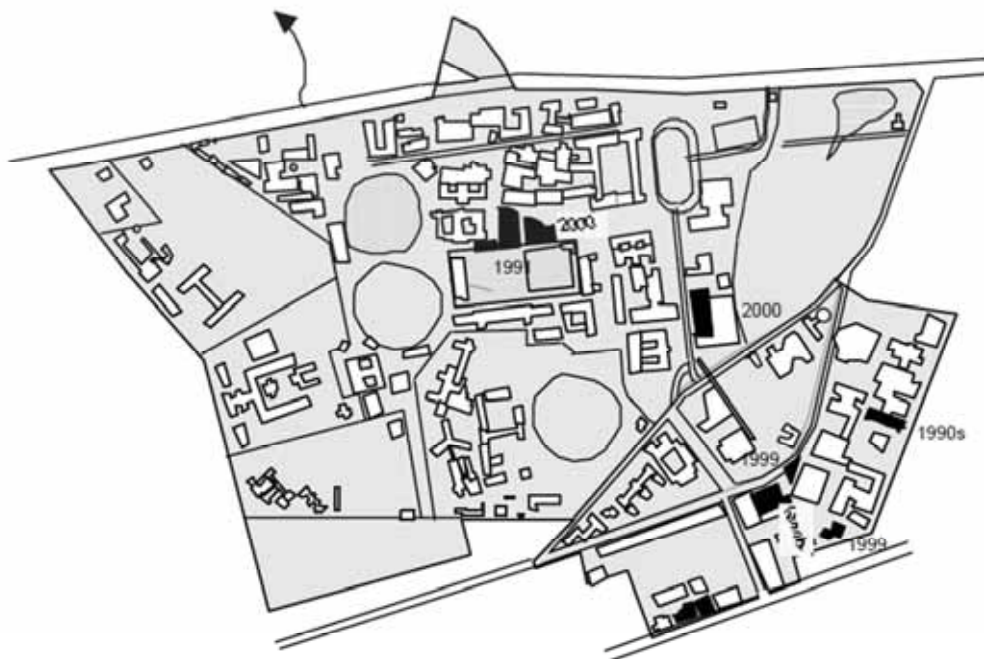


**Figure 10.** *Development of the university 1890-1900 showing construction of university buildings (Source: University of Sydney Grounds Conservation Plan Section 2.2).*



**Development of University 1941-1950**

**Figure 11.** *Development of the university 1941-1950 showing further construction of university buildings and modification of Orphan School Creek (Source: University of Sydney Grounds Conservation Plan Section 2.2).*



**Development of University 1990-2000**

**Figure 12.** *Development of the the university 1990-2000 (Source: University of Sydney Grounds Conservation Plan Section 2.2).*