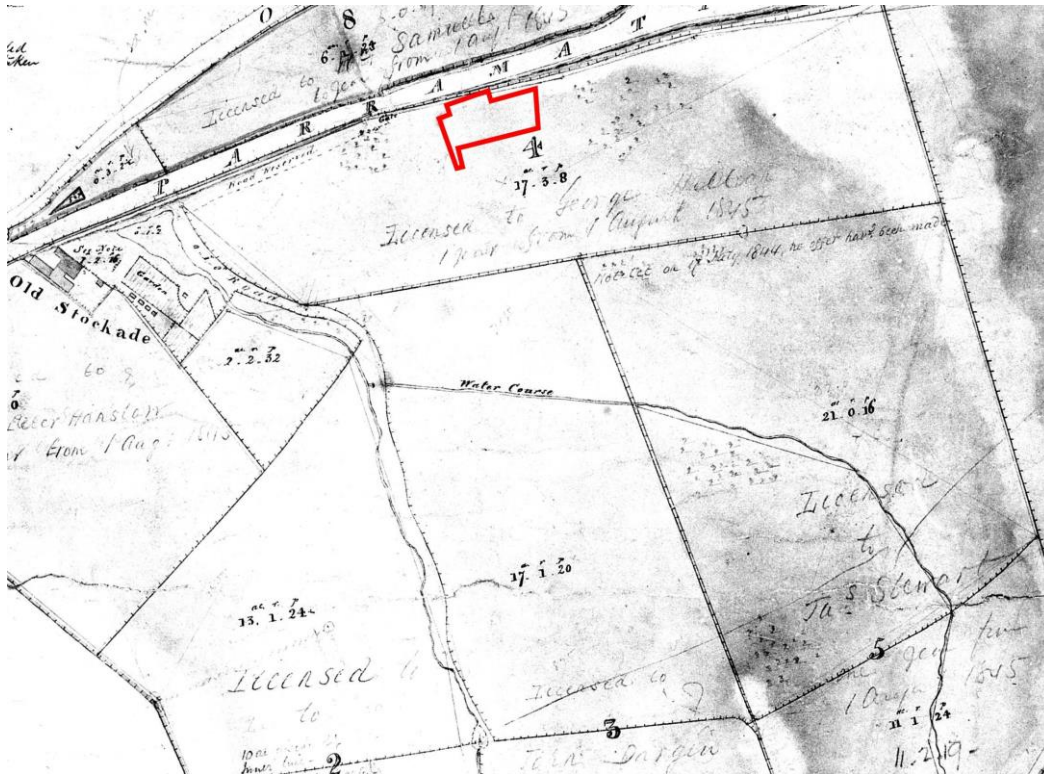


Historical Archaeological Assessment

Faculty of Arts and Social Sciences Building
University of Sydney, Camperdown





Detail of 1844 'Survey of Grose Farm', SRNSW Item No. 2841.

Report to
Lendlease

on behalf of
The University of Sydney

April 2016

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Executive summary

Results

This historical archaeological assessment has found that:

- The study area, the FASS Building Project site, has low potential to contain historical archaeological remains.
- Those potential remains on the site have been assessed as not meeting the criteria for local heritage significance. As a result they are not archaeological 'relics' as defined by the NSW Heritage Act. A similar definition would also apply to the requirements to projects assessed as a State Significant Development under the Environmental Planning & Assessment Act 1979.
- No further action is required regarding historical archaeology on the FASS Building Project site.

Recommendations

This report makes the following recommendations:

1. As no archaeological relics have been identified within the study area, there is no further requirement for archaeological investigation of this site.
2. A copy of this report should be included in the material to satisfy the SEARs of this project.

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Document Status

Name	Date	Purpose	Author	Reviewed
Draft 1	5/04/2016	Internal review	Nick Pitt	Tony Lowe
Draft 2	8/04/2016	Client review	Nick Pitt	Tony Lowe

Historical Archaeological Assessment Faculty of Arts and Social Sciences Building, University of Sydney, Camperdown

1.0 Introduction

1.1 Background

Casey & Lowe have been commissioned by Lendlease on behalf of the University of Sydney to prepare a 'European Archaeology' (ie Historical Archaeology) assessment for the FASS building project. The Faculty of Arts & Social Sciences (FASS) building project site is located in the northern area of the Camperdown Campus of the University of Sydney. It is approximately bounded by the RD Watt Building (A04), the Demountable Village (A06), Parramatta Road and the Heydon Laurence Building (A08). Formerly part of the study area was occupied by the J.R.A. McMillan Building.

This report is limited to 'European archaeology', also known as 'Historical archaeology', which is the archaeology relating to the use of the site after the traditional Aboriginal owners were displaced by British colonisation. The Aboriginal archaeology of the site has recently been assessed by another report by GML Heritage.¹

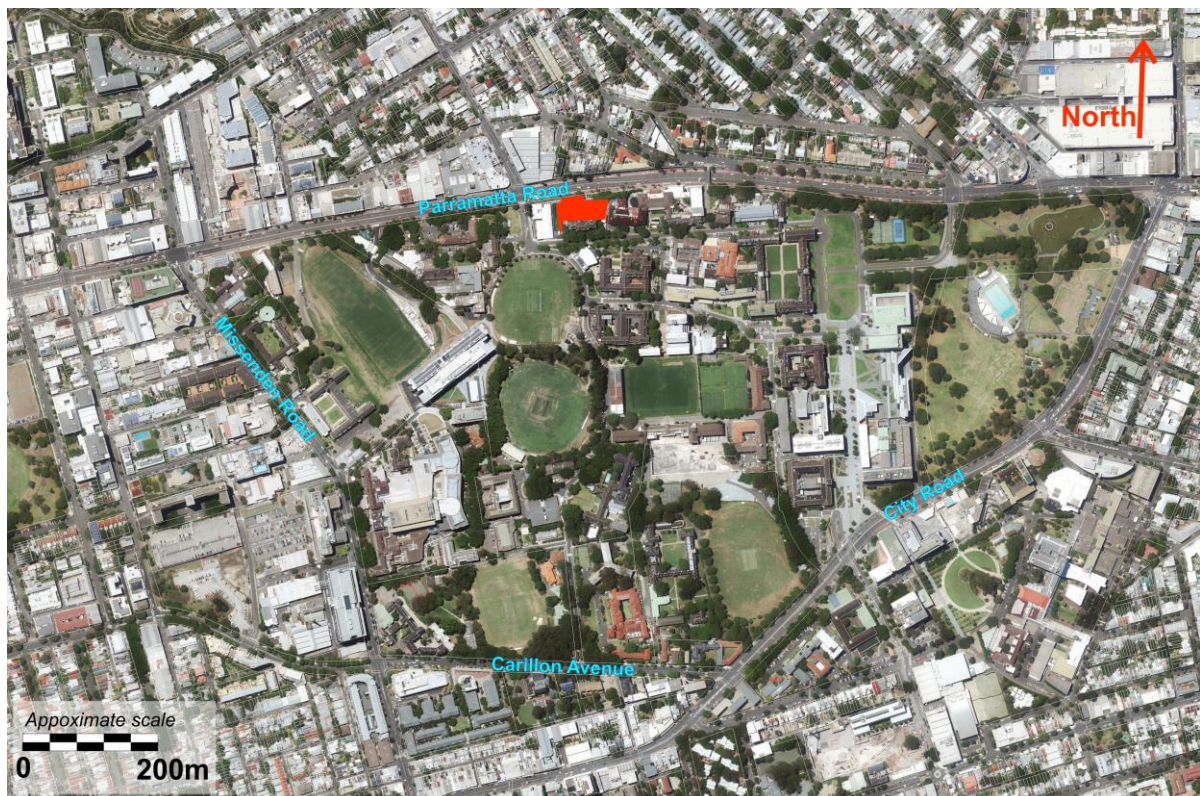


Figure 1.1: Study area location shaded in red. Imagery Date: 1/4/2014, Google Earth & NSW Globe, NSW LPI.

¹ GML Heritage 2015.

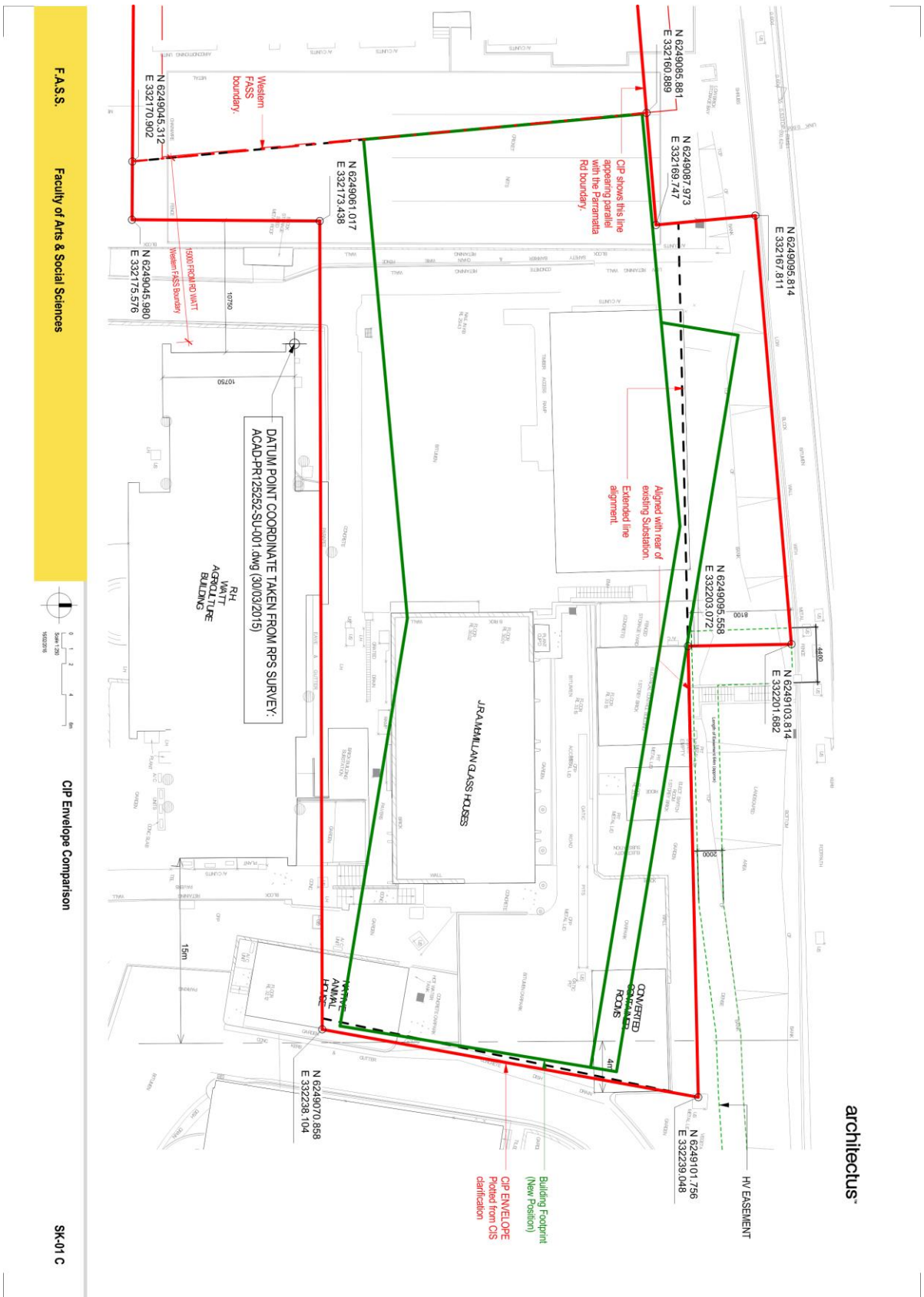


Figure 1.2: Plan showing outline of the FASS building project study area (red) and the proposed building footprint (green). Prepared by architectus, 16/02/2016, supplied by client.

1.2 Previous reports

The University of Sydney has been subject to a number of archaeological and heritage reports previously. The following are considered most relevant to this report:

Archaeological Assessment & Impact Statement, University Accommodation, St Paul's College, The University of Sydney, Casey & Lowe for Citta Property Group, August 2012.

Non-Indigenous Archaeological Assessment St Johns, University of Sydney, Casey & Lowe for Farrell Coyne Projects on behalf of St Johns College, September 2007.

Non-Indigenous Archaeological Assessment, CODCD Project, University of Sydney, Casey & Lowe for the University of Sydney, November 2009. (Appendix M of EIS for NSW Major Project MP 09_0051.

The University Of Sydney, Grounds Conservation Management Plan, Clive Lucas, Stapleton & Partners Pty Ltd for The University of Sydney, Campus Infrastructure Services, 6 December 2013.

University of Sydney Buildings, City of Sydney LGA, Aboriginal Heritage Due Diligence Report, GML Heritage for the University of Sydney, September 2015.

University Of Sydney, Grounds Conservation Plan, M. Pearson (Heritage Management Consultants Pty Ltd), D. Marshal, E. Ellsmore, V. Attenbrow, S. Rosen, R. Kerr & C. Betteridge for the Facilities Management Office, University of Sydney, October 2002. 2 Volumes.

1.3 Statutory Constraints

1.3.1 Environmental Planning & Assessment Act 1979

The current project is being undertaken as a State significant development under Part 4, Division 4.1 of the Environmental Planning & Assessment Act 1979 (application number SSD 7081). The Secretary's Environmental Requirements for this project were issued on 18 June 2015. This report addresses the following requirement:

9. Heritage:

...

The assessment shall address any archaeological potential and significance on the site and the impacts the development may have on this significance.

This historical archaeological assessment has been prepared in accordance with the guidelines of the NSW Heritage Council for the assessment of archaeological sites.

89J Approvals etc - legislation that does not apply

Section 89J of the Environmental Planning & Assessment Act 1979 states:

1. The following authorisations are not required for State significant development that is authorised by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):

...

(c) an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*,
 (d) an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*.
 ...
2. Division 8 of Part 6 of the *Heritage Act 1977* does not apply to prevent or interfere with the carrying out of State significant development that is authorised by a development consent granted after the commencement of this Division.

In effect, the Department of Planning and Infrastructure provides consent to impact on relics under 89J. Therefore no approvals are required under S139 or S57 of the *Heritage Act 1977* or S90 of the

National Parks and Wildlife Act 1974. The Department of Planning and Infrastructure will of course consult with the Office of Environment and Planning, both the Heritage Division and the Aboriginal Heritage Section, and the proposed work needs to conform with Heritage Division and Aboriginal Heritage Branch guidelines. This section does not exempt requirements under S170 of the Heritage Act.

1.3.2 NSW Heritage Act 1977

When a site is not being assessed under the *EP&A Act*, Part 4.1 or when work is it is being undertaken outside of Part 4.1, the main legislative constraint on archaeological remains is the relics provisions of the *Heritage Act 1977*. Provisions relating to S139 of the *Heritage Act 1977* are suspended by Part 4.1, Division 4.1, S89J.

According to Section 139:

- (1) *A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- (2) *A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*
- ...
- (4) *The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following:*
 - a. *any relic of a specified kind or description,*
 - b. *any disturbance or excavation of a specified kind or description,*
 - c. *any disturbance or excavation of land in a specified location or having specified features or attributes,*
 - d. *any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.*

A 'relic' is an item of 'environmental heritage'. Environmental heritage is defined by the *Heritage Act 1977* (amended) as:

those places, buildings, works, relics, moveable objects, and precincts of State or local heritage significance. (Section 4)

A relic as further defined by the Act as:

- any deposit, object or material evidence that:*
- a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and*
 - b) *is of State or local heritage significance. (Section 4)*

Any item identified as an historical archaeological site or relic cannot be impacted upon without an **excavation permit**. An excavation permit forms an approval from the Heritage Council for permission to 'disturb' a relic.

An application for an excavation permit must be made to the Heritage Council of NSW (Section 140) (or its delegate) and it will take approximately three to six weeks to be processed. The application for a permit must nominate a qualified archaeologist to manage the disturbance of the relics. There is a processing fee for each excavation permit application, the details of which can be obtained from the Heritage Division, Office of Environment and Heritage website.

Exceptions

An application for a S139(4) Exception to applying for an Excavation Permit may be made where the impact is considered to be in accordance with the following categories:

- (1A) An archaeological assessment, zoning plan or management plan has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that any relics in the land are unlikely to have State or local heritage significance.
- (1B) The excavation or disturbance of land will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them.
- (1C) A statement describing the proposed excavation demonstrates that evidence relating to the history or nature of the site, such as its level of disturbance, indicates that the site has little or no archaeological research potential.

1.4 Heritage listings

1.4.1 Sydney LEP 2012

The study area lies within the following Conservation Zone on the Sydney LEP 2012:

- **C5:** University of Sydney, Camperdown, local significance.

The study area is immediately adjacent to the following items on the Sydney LEP 2012:

- **I74:** RD Watt Building, University of Sydney, local significance.
- **I75:** Heydon-Laurence Building, University of Sydney including interior, local significance.



Figure 1.3: Detail of Sydney LEP 2015, Heritage Map 9. Study area outlined in blue, north arrow added.

1.4.2 University of Sydney S170 Register

The study area contains the following item which is included on the University S170 register:

- Substation No.54 & Switchroom²

The study area is immediately adjacent to the following items on the university S170 register:

- Heydon-Laurence (Zoology) Building
- R.D. Watt Building³

It is noted that a separate report will address the impacts of the FASS Building Project on standing built heritage items.

1.5 Authorship

This report was written by Nicholas Pitt, Archaeologist/Researcher, Casey & Lowe, with reference to previous assessments by Casey & Lowe. Sections 2.2 and 2.3 of the historic background is adapted from material written by historian Caroline Plim for a 2012 assessment of St Paul's College prepared by Casey & Lowe.⁴ Caroline Plim's 2012 history built on a 2007 history by historian Nicole Secomb, also commissioned by Casey & Lowe.⁵ This report has been reviewed by Tony Lowe, Director, Casey & Lowe. It has utilised research contained in earlier reports, as cited.

1.6 Acknowledgements

Ryan Thomas, Bill Vertsonis, Lendlease

1.7 Abbreviations

CMP	Conservation Management Plan
FASS	Faculty of Arts and Social Sciences
HRA	Historical Records of Australia (published series of collected historical records)
LEP	Local Environment Plan
SEARs	Secretary's Environmental Assessment Requirements
SSD	State Significant Development

² Clive Lucas & Associates 2013:166.

³ Clive Lucas & Associates 2013:166-167.

⁴ Casey & Lowe 2012:8-25.

⁵ Casey & Lowe 2007:6-16; Casey & Lowe 2009:6-18.

2.0 Historic background

2.1 Before 1789

Prior to British colonisation, which began in Sydney in January 1788, the study area would have been used by the traditional Aboriginal owners of the area, who were either the Cadigal or Wan(n)gal.⁶ Their history and prior land use is addressed by another specialist report, by GML Heritage, which deals with Aboriginal archaeology and heritage.⁷

2.2 Crown Reserve (Circa 1789) and Grants and Leases (1792–1797)⁸

As directed in orders dated 20 August 1789 Governor Arthur Phillip set aside a 400 acres (161.87 ha) Crown Reserve at 'Kangaroo Grounds' that was 'more or less thickly wooded throughout'.⁹

Contradicting the orders, on 29 September 1792 Lieutenant-governor Francis Grose was granted a 30 acre (12.14 ha) lease within the reserve. In 1794 another 30 acres at what was now known as Petersham Hill was leased (later granted) to Joseph Foveaux, followed in 1797 by a 28 acre (11.33 ha) lease to Thomas Laycock. Laycock acquired Grose's lease (known at the time as Grose Farm) at some stage after 1794 (Figure 2.1). The Study Area lies within the land which was leased to Thomas Laycock in 1797.

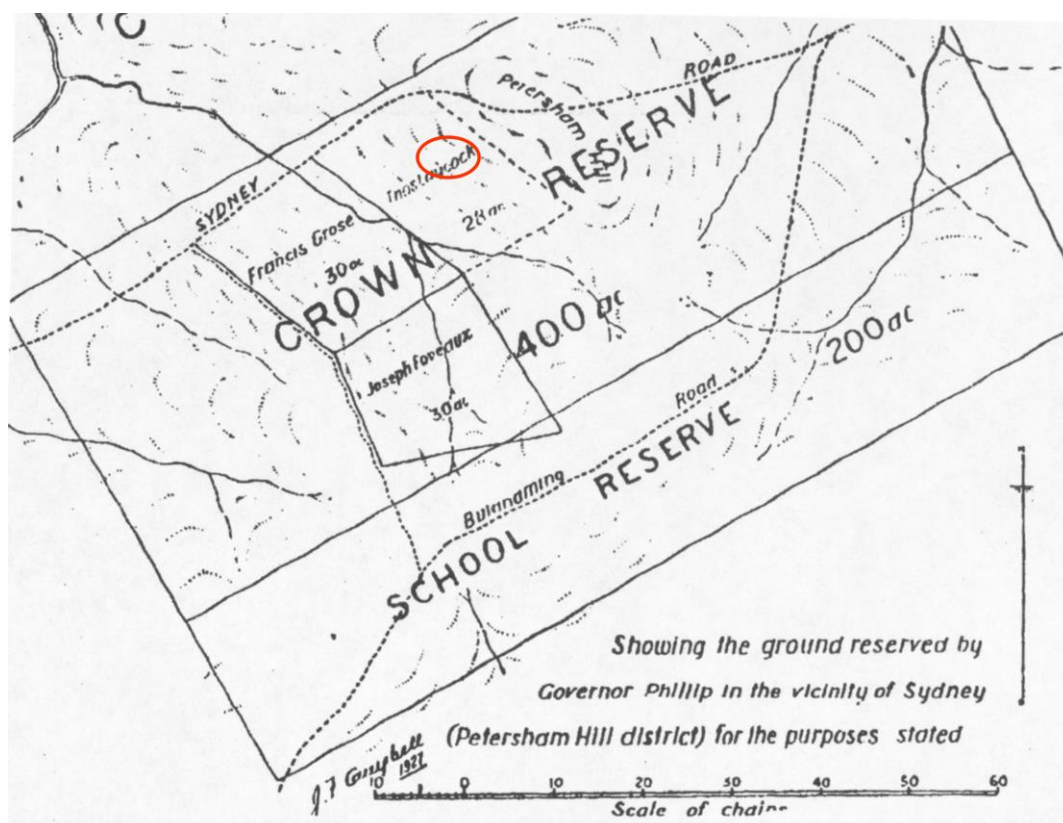


Figure 2.1: Map prepared by J.F. Campbell in 1927 showing the 400 acre Crown Reserve made in 1789 in relation to the church and school reserves and the later grants and leases to Grose, Foveaux and Laycock. The circle indicates the approximate location of the Study Area. (Campbell 1930, 275).

⁶ Historical sources give conflicting accounts of the boundary between these two groups. See GML Heritage 2015:25 and Pearson et al 2002: vol 2, pp A6-A7.

⁷ GML Heritage 2015.

⁸ This material was written by Caroline Plim, historian, for an earlier assessment of St Paul's College – Casey & Lowe 2012:8-11.

⁹ Campbell 1930:274-276.

2.3 The Orphan Institution and Grose Farm Paddocks (1803-1855)

It is not known how Grose, Foveaux and Laycock used their Petersham Hill farms before 15 August 1803 when Governor King made a grant of 500 acres (202.34 ha) at Petersham Hill to the Female Orphan Institution. Laycock and Grose's leaseholds were formally resumed but the grant also incorporated Foveaux's grant. On 3 August 1806 the Orphan Institution Committee advertised it for lease. Within days, however, an area of 220 acres (89.03 ha) on the western side of the landholding was resumed for a grant to William Bligh (Camperdown Farm).¹⁰

The Orphan Institution retained 280 acres (113.31 ha), the whole of which was now called Grose Farm. In 1812 twenty-five acres was advertised as 'enclosed together with a Garden, Dwelling House, and Out-buildings, well watered, and very conveniently situated for a Dairy, being within two miles of Sydney...'.¹¹ Notwithstanding its ownership by the Orphan Institution the Government played a role in the use and maintenance of Grose Farm. In 1813 and 1814 the government contracted Abraham Whittaker to construct a substantial split post and rail fence and ditch around the boundary of Grose Farm, completing it in April 1815.¹²

In 1823 Commissioner Bigge's Commission of Enquiry reported on Grose Farm concluding that, despite clearing and attempts to improve productivity, it was poor agricultural land. Improvements included construction of farm buildings, enlargement of an old dwelling house, construction of brick 'airing sheds', deepening and widening of the rivulet to form a series of tanks, and formation of a reservoir at its lowest point adjoining the public road. Convict vegetable gardens were established on the banks of the rivulet. An almost completed four-rail fence had replaced an older one. Grose Farm was primarily used for grazing draught cattle employed in Sydney. A succession of overseers managed the farm and constables stationed there oversaw work. Bigge concluded that the lack of reliable rainfall limited Grose Farm's value to the colony.¹³

Reports made to Bigge in 1820 recorded the presence of convicts' barrack housing, a mess house and ponds located in the northeast of the farm. There is no evidence that any of these buildings are associated with the Study Area, however, parts of the boundary ditch and fences, and possibly some of the tanks along the watercourses are likely to have been associated with it. Twenty acres (8.09 ha) of Grose Farm were cultivated with wheat, oats and maize and it was anticipated that 100 acres (40.47 ha) being cleared and stumped would be in use by 1821.¹⁴ There were many critics of the farm's planning and management.¹⁵

On 23 July 1823 the grant to the Orphan Institution was cancelled leaving it open for government use and convicts were subsequently employed there.¹⁶ In 1824 male orphans were instructed in vine cultivation but were disbanded in 1826, after which Grose Farm was mainly used for depasturing government bullocks.¹⁷ A survey drawn by Surveyor Elliot in December 1827 shows the farm of 201 acres 2 roods and 23 perches subdivided into 13 paddocks (Figure 2.2). No structures are shown in the vicinity of the Study Area.

¹⁰ *Sydney Gazette* 3 Aug 1806, 1.

¹¹ *Sydney Gazette* 16 Oct 1808, 1; *Sydney Gazette* 29 Feb 1812, 2.

¹² *Sydney Gazette* 12 Jun 1813, 2; *Sydney Gazette* 8 Jan 1814, 1; *Sydney Gazette* 30 Apr 1814, 2; *Sydney Gazette* 26 Nov 1814, 2; *Sydney Gazette* 22 Apr 1815, 2.

¹³ Bigge 10 Jan 1823 cited in Campbell 1930:282; Index to the Colonial Secretary's Papers, SRNSW; Grose Farm overseers and constables listed in the Colonial Secretary's Papers and published in the *Sydney Gazette*.

¹⁴ JT Bigge Report Appendices and other sources cited in Casey & Lowe 2007:6.

¹⁵ J Campbell to Col Sec, 12 Feb 1822, SRNSW Reel 6017 p25-31, cited in Casey & Lowe 2007:7.

¹⁶ *Sydney Gazette* 12 Aug 1826, 1.

¹⁷ Campbell 1930:284-5.



Figure 2.2: Survey of Grose Farm prepared by Surveyor Elliot on 10 December 1827. The circle indicates the approximate location of the Study Area (SRNSW Surveyor General Sketch Books, Vol 1, fol 6).

On 10 January 1832 James King, a Sydney merchant, unsuccessfully applied for the use of 50 acres (20.23 ha) of the cleared land fronting Parramatta Road largely abandoned by the government.¹⁸ Other unsuccessful suggestions for Grose Farm's use included as the Governor's private domain (from 1826) and a proposal by Surveyor Thomas Mitchell in 1848 for a railway terminus.¹⁹

The Grose Farm stockade or barracks (off Parramatta Road) continued in use, but the overall grant attracted little attention until 17 July 1844 when it was subdivided into eight allotments. Yearly leases or licences were offered at auction. The existing buildings and fences were to be maintained by the lessees, and trees were not to be cleared. The Police Stations at the corners of Lots 1 and 6 were not for lease (Figure 2.3).²⁰

¹⁸ Campbell 1930:285; James King, 2 Oct 1832, *Historical Records of Australia*, Vol 16, 75 cited in Casey & Lowe 2007:8.

¹⁹ *Sydney Morning Herald* 13 Aug 1847, 3; 2 Dec 1848, 3; *Sydney Morning Herald* 16 Mar 1841, 3; Casey & Lowe 2007:8.

²⁰ *NSW Government Gazette* 25 Jun 1844 [no. 57], p 839; *Sydney Morning Herald* 26 Jun 1844, 3.

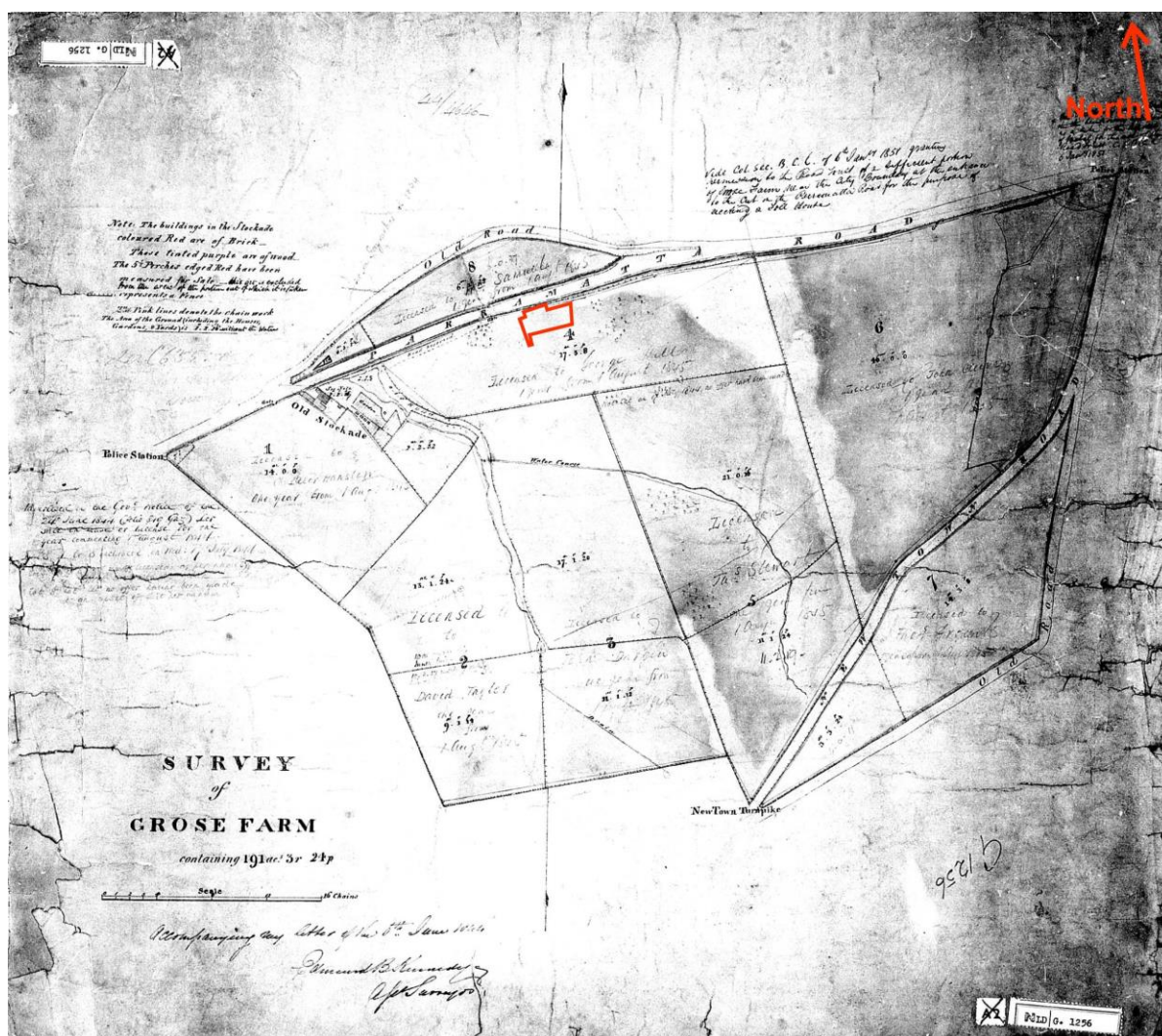


Figure 2.3: Survey of Grose Farm prepared by Surveyor Kennedy in January 1844. The plan shows the paddock, creeks, rivulets and vegetation. The approximate location of the Study Area is indicated in red (Item No 2841, State Records of New South Wales).

The Study Area is located in what was a north part of Lot 4, close to Parramatta Road (Figure 2.3). Fences and areas of vegetation are indicated on the 1844 survey. The names of licensees from 1 August 1845 appear in pencil (George Holborn(?) – Lot 3). Until 1853, the 'Grose Farm Paddocks' leases were auctioned annually.²¹ In August 1851 the names of lessees and other details were published in the *Sydney Morning Herald*. William Peisley leased Lot 4 (17 acres 2 roods). The paddocks attracted graziers or 'butchers' transferring stock to and from Sydney markets, but limited public use or recreation on the Crown Reserve.²²

Debate about Grose Farm's future continued in 1852, with pressure put on the government to preserve the diminishing areas of public land in or near the city as well as to guarantee public access.²³ It was announced in 1853, however, that more than 100 acres of Grose Farm was now 'more or less pledged' for a university and colleges, along with promises that it would incorporate public space.²⁴

²¹ See *Sydney Morning Herald* and *NSW Government Gazette*.

²² *Sydney Morning Herald* 16 Aug 1851, 5; *Sydney Morning Herald* 16 Jul 1852, 2.

²³ *Sydney Morning Herald* 16 Jul 1852, 2.

²⁴ *Sydney Morning Herald* 1 Jun 1853, 2; *Sydney Morning Herald* 15 Jul 1853, 2.

2.4 University of Sydney at Grose Farm (from 1855)

The University of Sydney was founded in 1850, and teaching commenced in 1852 at a building formerly occupied by the Sydney College on College Street, Sydney. It was not until 18 January 1855 that 126 acres (50.99 ha) was granted to the university.²⁵ The area which was granted 1855 forms the core of the present University of Sydney Camperdown Campus, although there have been some changes since.

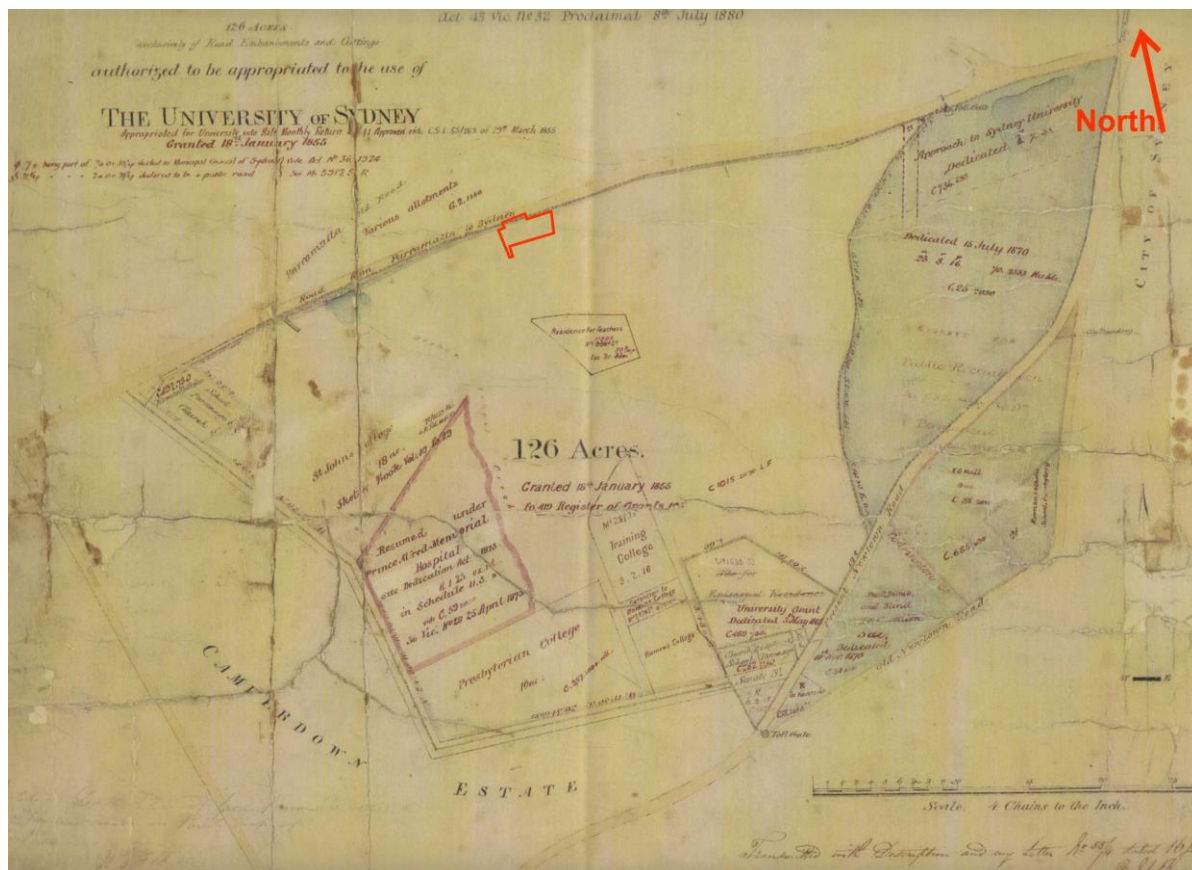


Figure 2.4: Crown Plan showing the 1855 126 acre grant to the University of Sydney with later property boundary changes. Study area outlined in red. CP 635.690, NSW LPI.

From this point, this historic background focuses on the land use of the study area specifically. Further information regarding the history of the university's site as a whole can be found in the *University of Sydney Grounds Conservation Plan* (Pearson et al, 2002) and elsewhere.

The Study Area appears to have remained largely undeveloped into the 20th century. A plan was developed in 1857 for three residences and an associated garden to be constructed northwest of the Quadrangle. These residences do not appear to have been completed, on account of limited available funds.²⁶ Even so, the study area is located to the west of the intended location of these residences (Figure 2.5).

A survey of the university in 1885 does not show any buildings on the study area at the time (Figure 2.6, Figure 2.7). The same plan shows by hatching that the area around the study area was steeply sloping. The sloping topography probably discouraged the intensive development of the study area while more level sites on higher ground were available.

²⁵ Grant Register Serial 198 pp72-78, NSW LPI.

²⁶ Pearson et al. 2002: Vol 2, p A25.

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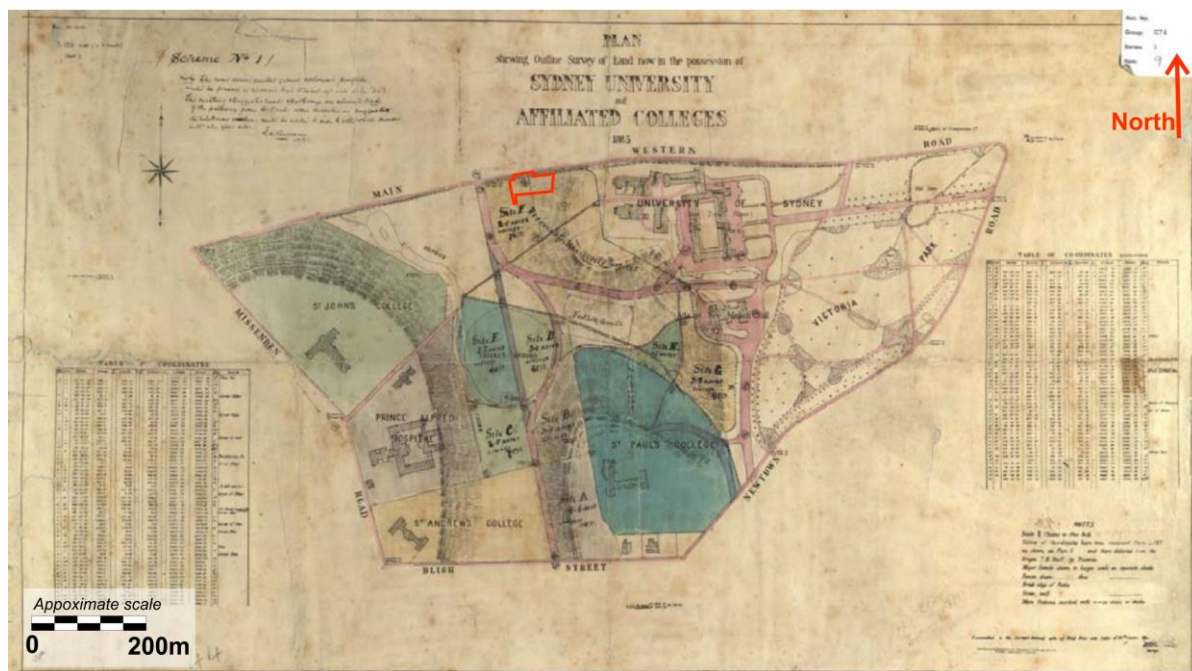


Figure 2.7: 'Plan shewing Outline Survey of Land now in the possession of Sydney University and Affiliated Colleges 1885' with annotations 'Scheme No. 1, building sites'. This map appears to be the same as Figure 2.6, with buildings and potential building sites added. University of Sydney Archives, Series 617, G741-09. (From Clive Lucas & Associates 2013:83, fig 2.25).

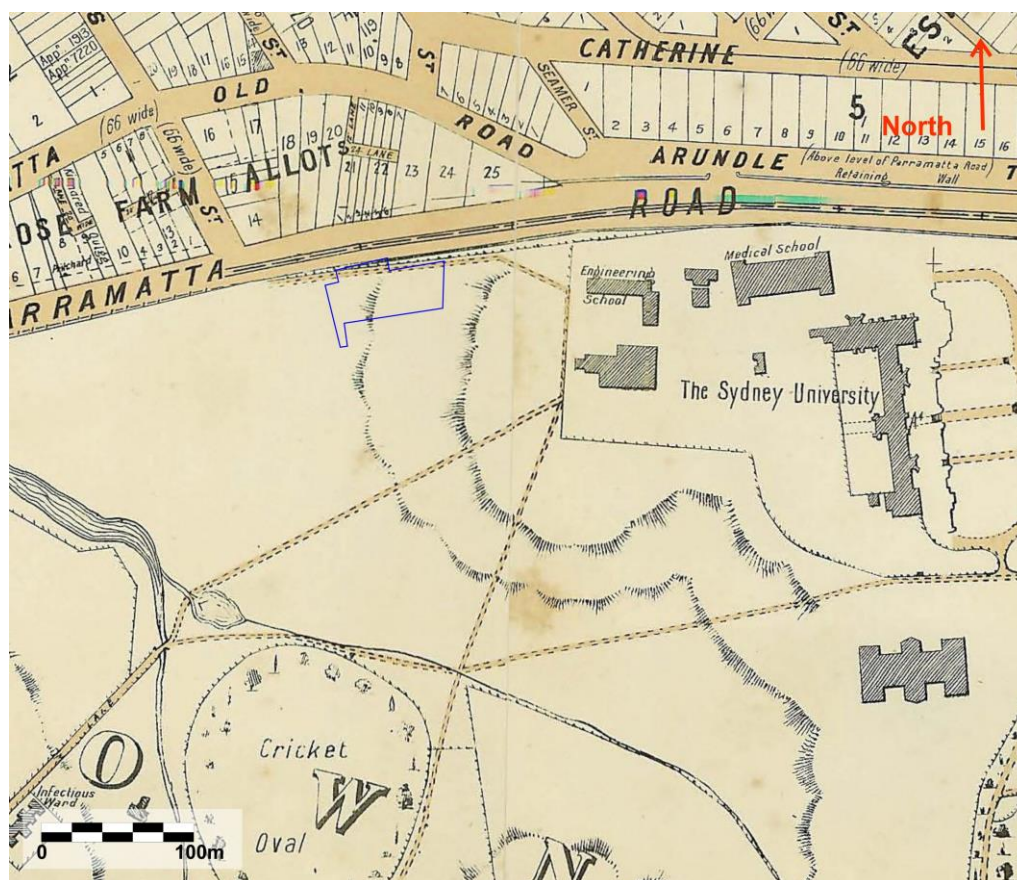


Figure 2.8: Detail of 'Map of the Municipalities of The Glebe, Camperdown, Newtown, Macdonaldtown & Darlington, Parishes of Petersham & Alexandria', Higinbotham and Robinson publishers. Study area (blue), scale and north arrow added. Map adjusted to remove space between printed panels. *Historical Atlas of Sydney*, City of Sydney Council Archives.

The first known building within the study area was the Electricity Substation. This was built around 1913.²⁷ The R D Watt Building to the immediate south of the study area was constructed between 1911 and 1916.²⁸ Its construction appears to have led to the construction of a number of glasshouses and other outbuildings to its north. When these were constructed is not entirely certain, but they do appear on a 1943 aerial showing the study area (Figure 2.9). According to a 1957 map of the university, these glasshouses were used for Biology (Figure 2.12). They also may have been used by Agriculture at other times.

In the years immediately following the Second World War, a number of 'transient' buildings were constructed. These had asbestos fibre cement (fibro) sheeting walls and roofs, and brick and concrete foundations. One of these buildings, later known as the 'Ross Street Building (A03)', was built partly within the present study area. It was initially used for Biology, although it is later believed to have been used for a variety of other purposes (Figure 2.10, Figure 2.11, Figure 2.12, Figure 2.13).²⁹ It was demolished around 2011.

The JRA McMillan Building was constructed within the study area in 1962 (Figure 2.13). It was a multistorey building designed to house facilities related to agricultural research, although it was later used to provide teaching and learning facilities. It was demolished in 2012.³⁰ On available evidence, it does not appear to have had a basement.

At present the study area is largely occupied by a number of temporary facilities, including a carpark, cricket nets and demountable buildings. The old glasshouses associated with JRA McMillan also remain on site, as does the 1913 substation, along with another electrical switch room.

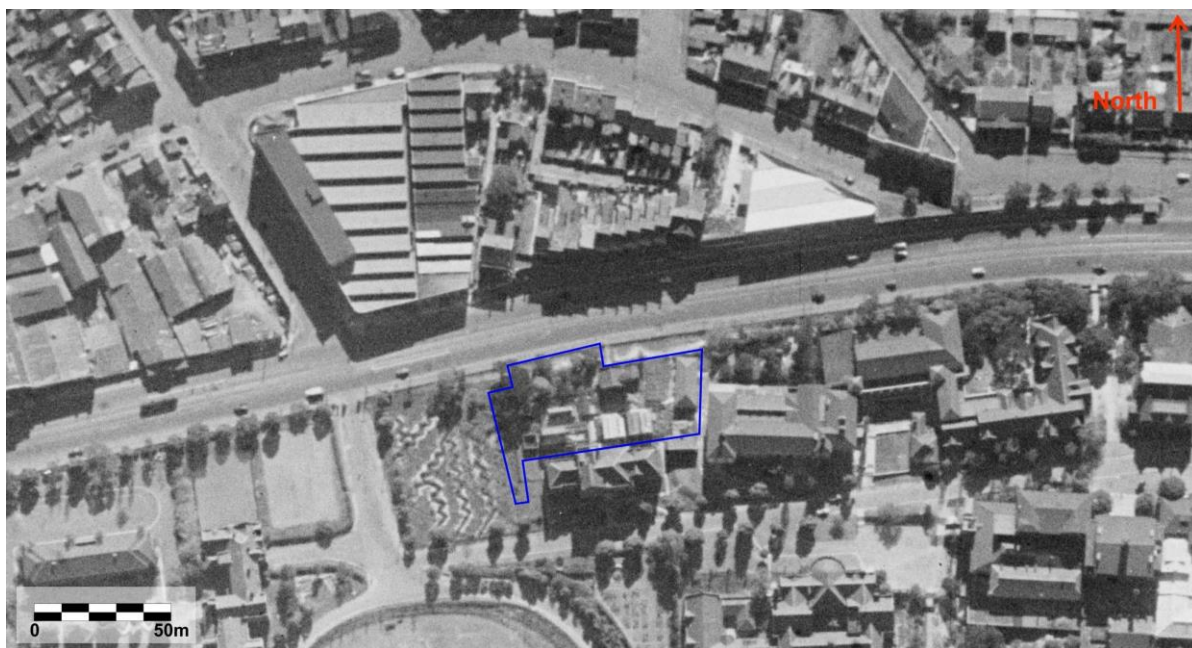


Figure 2.9: 1943 aerial photograph. Study area outlined in blue. SIX Maps, NSW LPI.

²⁷ Pearson et al. 2002: Vol 2, p A40.

²⁸ Pearson et al. 2002: Vol 2, p A40.

²⁹ Pearson et al. 2002: Vol 1, p 21, Vol 2, p A56.

³⁰ Pearson et al. 2002: Vol 2, p A62; University of Sydney 2015:3.

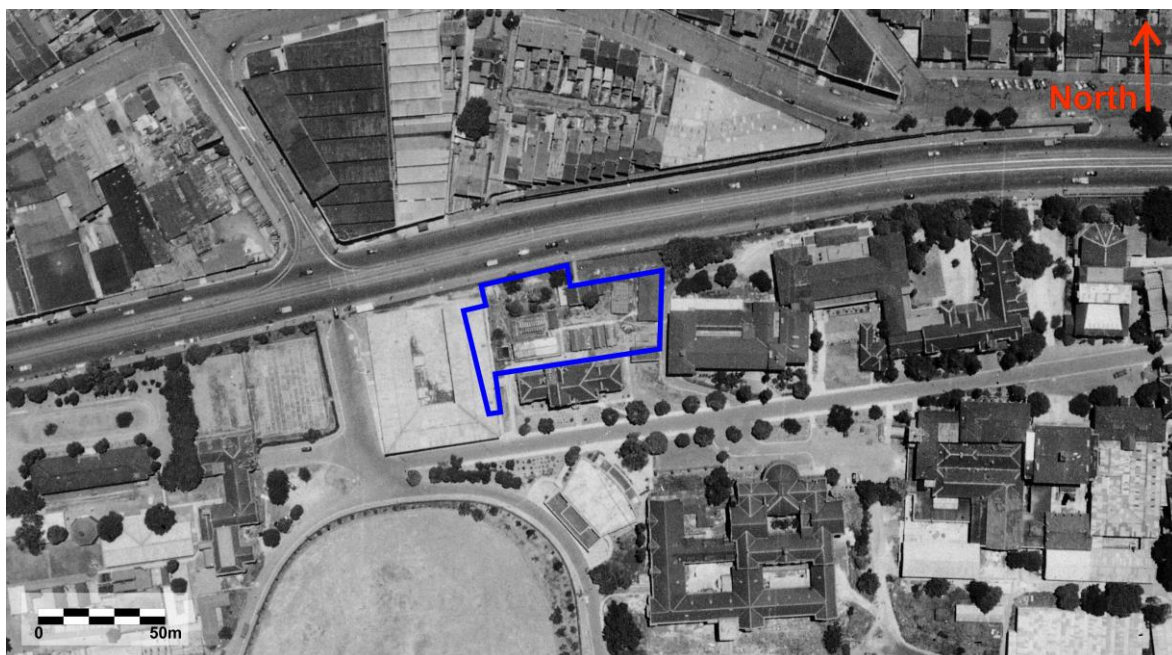


Figure 2.10: 1949 aerial photograph. Study area outlined in blue. Historical Atlas of Sydney.

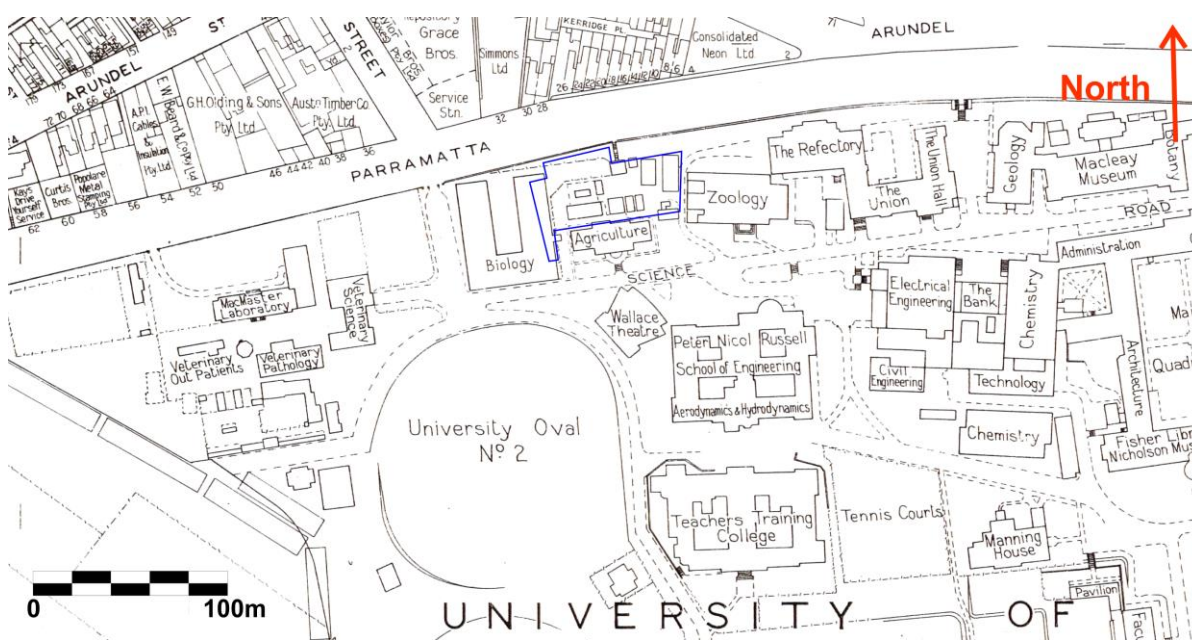


Figure 2.11: c.1956 Civic Survey, detail of sheet 14. Study area outlined in blue, scale and north arrow added. Historical Atlas of Sydney.



Figure 2.12: Detail of 1957 map of the University of Sydney. Study area circled in blue. North is at the base of the map. University of Sydney Archives Series 617, G741-40.



Figure 2.13: 2007 aerial. Study area outlined in blue. Google Earth.

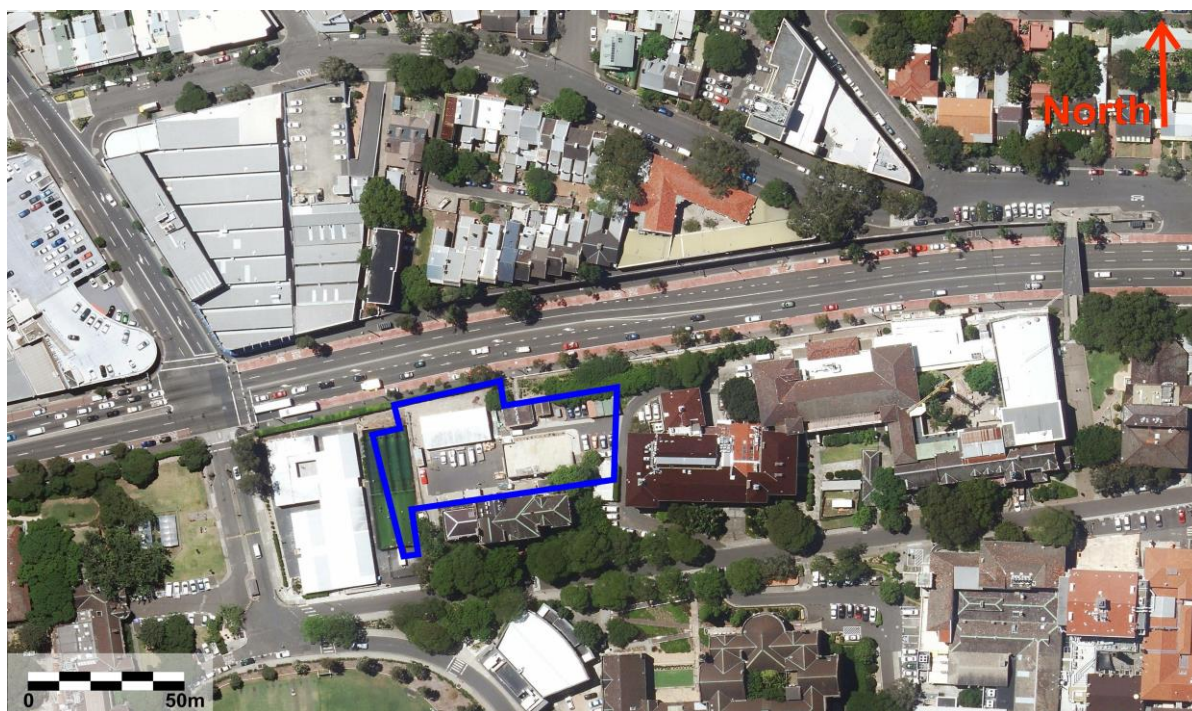


Figure 2.14: 2014 aerial. Study area outlined in blue. NSW Globe, NSW LPI (using Google Earth).

3.0 Archaeological potential

3.1 Overview

Archaeological Potential is the degree to which archaeological remains are considered likely to survive within the study area in light of modern impacts. The archaeological potential of an area depends on the historical uses of the site (Section 2.0), its archaeological context and other factors including previous impacts. This section will present additional material relating to the archaeological remains on the study area, before assessing the archaeological potential of the study area.

It should be noted that the likely presence of some physical remains does not necessarily mean that the potential remains are considered to reach the threshold of local heritage significance which is required for protection under the relics provisions of the NSW Heritage Act, or the equivalent expectations applied under SEARs for State Significant Developments (SSDs).

This report will assess the archaeological significance of the potential remains in section 4.0.

3.2 Geotechnical testing

Geotechnical and environmental testing has been undertaken within the study area by Coffey.³¹ Although not their primary aim, geotechnical and environmental boreholes do provide information regarding the level of fills and deposits, which is useful for assessing the archaeological potential of an area. The 2016 Coffey geotechnical report found that the site was covered by up to 1.34m of fill (Table 3.1). The fill was mostly gravelly sand and gravelly clay, which is consistent with the kind of material which may have been brought onto the site to level it. Some of the fill may also be associated with disturbance from the earlier structures on the site, including the glasshouses and the J.R.A. McMillan building.

Table 3.1: Reproduction of Table 1, Inferred Ground Model, from Coffey 2016a, p 4.

Geotechnical Unit	Material	Description	Depth to Top of Unit ² (m)	Approximate Thickness (m)
1a	Fill - Pavement	<ul style="list-style-type: none"> Concrete/Asphalt 	0	0.02 – 0.12
1b	Fill ³	<ul style="list-style-type: none"> Silty and Gravelly Clay and Gravelly Sand Low to high plasticity clay, fine to coarse grained sand 	0.02 – 0.12	0.07 – 1.34
2	Residual Soil	<ul style="list-style-type: none"> Silty Clay Medium and high plasticity Very stiff to hard consistency 	0.2 – 1.4	0 – 0.8
3	Bedrock	<ul style="list-style-type: none"> Shale Extremely weathered Very low strength Class V¹ 	0.7 – 2	Not penetrated

Notes on Table 1:

1. Rock classified as sandstone in accordance with Pells et al (1998) "Foundations on Sandstone and Shale in the Sydney Region" Aust. Geomech. Jnl, Dec 1998.
2. The depths are based on the Coffey boreholes and may not be representative of all areas at the site.
3. The fill is not one uniform layer but at different thicknesses at discrete locations.

³¹ Coffey 2016a; Coffey 2016b.

3.3 Summary of archaeological potential

The historic background provided in section 2 suggests that there have been no major structures within the study area before the mid 20th century. This significantly limits the archaeological potential of the site. Any possible historical features predating the construction of glasshouses on the site are likely to have been transitory features such as fences and footpaths. These generally are difficult to identify and conclusively interpret when investigated individually, although they can be found during the archaeological investigation of a large open area. The geotechnical testing suggests that the construction and demolition of earlier structures such as the JRA McMillan Building and the Ross Street Building (A03) have caused some disturbance to pre-existing soils, but that residual soil remains across the study area between 0.2 and 1.4m below the surface.

In summary the kinds of historic features which may remain within the study area are likely to be:

- Transitory features from the occupation of the site as farm land and pastures – these might include posthole from fencing and footpaths
- 19th-century university footpaths and possibly other landscaping
- Foundations for pre-1943 glasshouses

The overall potential for these remains to have survived on the site is low. Later site works are likely to have removed most of the foundations for the pre-1943 glasshouses and may have also disturbed any earlier transitory features such as fence postholes and footpaths. Earlier transitory features also have a low potential to have survived, as they would have been only had a small impact on the landscape to begin with and would require exceptional circumstances to be preserved in a manner which would be interpretable through archaeological investigation.

4.0 Archaeological significance

4.1 Heritage Significance

Heritage significance is distinct from archaeological potential. Assessment of archaeological potential considers the probability of physical evidence from previous human activity to still exist on a site. Assessment of heritage significance for archaeological features considers the cultural values associated with those remains.³² This section will outline the basis of assessing the heritage significance of archaeological remains, before then assessing the significance of the potential features within study area.

4.2 Heritage significance and archaeology

A number of guidelines are relevant to the heritage assessment of historical archaeological remains. In NSW the most relevant of these are those developed by the Heritage Branch (now the Heritage Division) in 2009: *Assessing Significance for Historical Archaeological Sites and 'Relics'*. The heritage criteria, adopted by the NSW Heritage Council and the associated guidelines issued in 2001 (*NSW Heritage Manual - Assessing heritage significance*) are also foundational.

The 2001 heritage criteria are used to assess the heritage significance of archaeological items. To be assessed as having heritage significance an item must:

- meet at least one of the one of the seven significance criteria
- retain the integrity of its key attributes³³

Relics must also be ranked according to their heritage significance as having:

- Local Significance
- State Significance

If a potential relic is not considered to reach the local or State significance threshold then it is not a relic under the NSW *Heritage Act 1977*.

Section 4A of the NSW *Heritage Act 1977* defines these two levels of heritage significance as follows:

'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

'local heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.³⁴

Although 'research significance' (criterion e. of the Heritage Council criteria) has traditionally been seen as the primary heritage value of archaeological remains,³⁵ if an item is to be considered to be of State significance it should meet more than one criterion.³⁶ As the 2009 guidelines state:

Archaeological Significance may be linked to other significance categories especially where sites were created as a result of a specific historic event or decision, or when sites have been the actual location of particular incidents, events or occupancies.

³² This distinction has long been recognised by historical archaeologists working in heritage management, but has recently been restated in *Practice Note – The Burra Charter and Archaeological Practice* (Australia ICOMOS 2013:7).

³³ NSW Heritage Office 1996:26.

³⁴ NSW Heritage Act 1977 (current January 2014), section 4A; NSW Heritage Branch 2009:6.

³⁵ Bickford & Sullivan 1982; NSW Heritage Office 1996:26.

³⁶ NSW Heritage Branch 2009:9, cf NSW Heritage Act 1977, section 33 (3) (a) which requires an item to meet more than one of the heritage criteria for an item to be listed on the State Heritage Register.

Other relevant factors may be comparative values related to the intactness and rarity of individual items. The rarity of individual site types is an important factor, which should inform management decisions.³⁷

Similar sentiments are also contained in the 2013 Australia ICOMOS Practice Note: *The Burra Charter and Archaeological Practice*.³⁸

As a result of the need to assess sites using multiple criteria, the 2009 guidelines include the following categories and associated questions relevant to historical archaeological sites:

- Archaeological Research Potential (current NSW Heritage Criterion E).
- Associations with individuals, events or groups of historical importance (NSW Heritage Criteria A, B & D).
- Aesthetic or technical significance (NSW Heritage Criterion C).
- Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F & G).³⁹

The 2009 significance guidelines included examples which were in part intended to help demonstrate how an assessment may distinguish between local and State significant archaeological sites. The examples provided, however, were fairly obvious ones, and do not help us to work out how a less obvious site has State rather than local significance. This means that it remains down to the skill and expertise of the archaeologist assessing the site to make the distinction between local and State significance.

4.3 Discussion of Archaeological Heritage Significance

The discussion of archaeological potential (section 3.3) identified that there was only a low potential across the site for physical remains associated with earlier historic features. These were:

- Transitory features from the occupation of the site as farm land and pastures – these might include posthole from fencing and footpaths
- 19th-century university footpaths and possibly other landscaping
- Foundations for pre-1943 glasshouses

The archaeological heritage significance of these potential remains are assessed here.

Criterion (a): Historic Significance - (evolution)

an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

Any footpaths or fencelines within the study area would have formed part of the landscape of firstly Grose Farm and later the university. Grose Farm was important in the development of NSW, both in relation to its role as an early centre of farming, and the various roles it played as an institutional farm, variously used to employ convict men, boys and in association with the Orphan Institution. The University of Sydney was and continues to be an important place of education and research within NSW. However, the footpaths and fencelines of Grose Farm and the university in the 19th century did not form an integral part of those institutions. They were largely coincidental to the functioning of the site as a whole.

³⁷ NSW Heritage Branch 2009:9.

³⁸ Australia ICOMOS 2013a:3.

³⁹ NSW Heritage Branch 2009:11-13.

Likewise, although the pre-1943 glasshouses within the study area would have been useful and necessary for teaching and research related to plants, they were only associated with a small part of the university's overall importance to the cultural development of NSW.

Criterion (b): Associative Significance – (association)

an item has strong or special association with the life or works of a person, or group of persons, or importance in NSW's cultural or natural history (or the cultural or natural history of the local area).

The study area is associated with land leased to Thomas Laycock in 1797. Laycock was the quartermaster for the NSW Corps. He arrived in Sydney in 1791 and lived the rest of his life in NSW. His importance to Australian history is sufficient to warrant an entry in the *Australian Dictionary of Biography*.⁴⁰ However, the land on which the study area is only one of many sites leased or granted to Laycock. It is not thought that he lived on the study area.

The study area is also associated with Professor J R A McMillan, largely since it is the former site of the JRA McMillan Building, which was named in his honour. McMillan was an agricultural scientist in the mid 20th century, who was at one time the Dean of the Faculty of Agriculture.⁴¹ Although prominent at the time, McMillan is not particularly well-known today. The JRA McMillan Building was associated with him largely through its name. The building appears to have been completed in 1964, while McMillan retired in 1966.⁴²

Criterion (c): Aesthetic Significance - (scenic qualities / creative accomplishments)

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the cultural or natural history of the local area).

The extent of the physical remains on the study area are likely to consist at most of postholes associated with fences, possible historic surfaces associated with footpaths and footings associated with the pre-1943 glasshouses. These remains are not thought to demonstrate a high degree of technical or creative achievement, and are not thought to be aesthetically affective.

Criterion (e): Technical/Research Significance - (archaeological, educational, research potential and scientific values)

an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

The historic physical remains within the study area are not thought to have a good ability to answer meaningful research questions. This is largely on account of their anticipated fragmentary nature. Although there are many research questions which could be asked regarding Grose Farm, the transitory remains of fencelines and footpaths are unlikely to be able to address these, particularly given the fact that the study area is a relatively small portion of what was a 200 acre area.

Any remains associated with the pre-1945 glasshouses are anticipated to have been somewhat disturbed by later buildings. The research potential of these remains is thought to have been limited by later impacts.

⁴⁰ Anon. 1967.

⁴¹ *Canberra Times* 19 October 1966, p 8h.

⁴² Faculty of Agriculture, Food and Natural Resources, University of Sydney 2010:4.

Criterion (f): Rarity

an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

The potential physical remains within the study area are not thought to be particularly rare. Fencelines were established all over the Sydney basin in the first decades after 1788, as European agricultural techniques were imported into Australia and began to modify the landscape. Likewise, informal footpaths would have criss-crossed the newly demarcated fields and paddocks.

Early to mid 20th-century glasshouses, similar to those which were located within the study area, remain standing in various locations throughout Sydney and NSW. A notable and publically accessible example are the glasshouses at the Royal Botanic Gardens, Sydney.

Criterion (g): Representativeness

an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).

Previous impacts on the potential remains on the site have decreased their ability to represent their category of feature. The process of demolition is thought to have disturbed some of these remains, particularly those associated with the pre-1943 glasshouses. All the potential remains within the study area are expected to be relatively difficult to interpret, even if they were intact.

4.4 Significance of potential remains

The study area (the FASS Building Project site) has a low potential to contain physical remains of previous use of the site since 1788. These potential remains consist of footpaths and fencelines, which are associated with the site's history as part of Grose Farm and the university in the 19th century, and the remains of foundations for 20th-century glasshouses, which were built prior to 1943.

These potential remains are not thought to be able to address any meaningful research questions, largely due to their likely limited and anticipated fragmentary nature.

The potential remains are only weakly associated with the wider historic themes which make Grose Farm and the university important to the historic and cultural development of NSW. They also are only weakly associated with prominent individuals, including Thomas Laycock and JRA McMillan, who were associated with the site in different ways.

The poor integrity of the potential remains and their inability to address any meaningful research question mean that they do not meet the threshold for local heritage significance. As a result they are not archaeological 'relics' as defined by the NSW Heritage Act, and also would not receive any protection under the Environmental Planning & Assessment Act 1979.

5.0 Results and Recommendations

5.1 Results

This historical archaeological assessment has found that:

- The study area, the FASS Building Project site, has low potential to contain historical archaeological remains.
- Those potential remains on the site have been assessed as not meeting the criteria for local heritage significance. As a result they are not archaeological 'relics' as defined by the NSW Heritage Act. A similar definition would also apply to the requirements to projects assessed as a State Significant Development under the Environmental Planning & Assessment Act 1979.
- No further action is required regarding historical archaeology on the FASS Building Project site.

5.2 Recommendations

This report makes the following recommendations:

1. As no archaeological relics have been identified within the study area, there is no further requirement for archaeological investigation of this site.
2. A copy of this report should be included in the material to satisfy the SEARs of this project.

6.0 References

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